doremi

Technology Leadership
for Digital Cinema

ShowVault

Digital Cinema Server

User Manual

Version 1.4

The English version of this document is the only legally binding version. Translated versions are not legally binding and are for convenience only.

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Software License Agreement

The software license agreement can be found at the following location:
http://www.doremilabs.com/support/cinema-support/cinema-warranties/

Hardware Warranty

The hardware warranty can be found at the following location:
http://www.doremilabs.com/support/cinema-support/cinema-warranties/

China Compulsory Certification (CCC)

该产品仅适用于海拔2000 米以下地区

该产品仅适用于非热带地区

声 明

此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

1 Introduction

1.1 Purpose

This manual is intended to demonstrate to the user how to use the software on the ShowVault.

1.2 Software Version

- This manual is intended for use with software version 2.2.0-0 and higher.
- The IMB SM Versions are:
  - 5.0.6 and higher for Barco Series-2 and Christie Series-2 Projectors
  - 5.0.12 and higher for NEC Series-2 Projectors
- For previous versions of the software and earlier IMB Revisions, see previous versions of this document.

1.3 Contact Information

If in need of help or assistance, please contact Doremi Labs Technical Services:
USA
24/7 Technical Services line: + **1-866-484-4004**
Technical Services Email: cinemasupport@doremilabs.com

Europe
24/7 Technical Services line: + **33 (0) 492-952-847**
Technical Services Link: http://support.doremitechno.org/ticketing

Japan
Technical Services line: + **044-966-4855**
Technical Services Email: support@doremilabs.co.jp

Australia ~ China ~ India ~ Indonesia ~ Korea ~ Malaysia ~ New Zealand ~ Philippines ~ Singapore ~ Taiwan ~ Thailand
Technical Services Email: supportasia@doremilabs.com

2 ShowVault Overview

The ShowVault is a high quality DCI JPEG-2000 and MPEG2 server/player capable of playing movies and trailer packages in MXF format at up to 250Mbits/sec, when connected to a Series-2 Projector equipped with a Doremi Integrated Media Block (IMB). The ShowVault features a PCI-Express cable that connects with the IMB board installed in the Series-2 Projector. This connection is used to transfer digital cinema files to the IMB, which supports formats of 12-bit, 4:4:4, or 10-bit 4:2:2 for 2D and 3D applications, at various resolutions and frame rates. Movies are stored on an internal RAID5 storage.

2.1 ShowVault Front Panel

- A ShowVault-3 front panel with touchscreen is shown below:

Figure 1: ShowVault-3

- A ShowVault-3-NTS front panel with no touchscreen screen is shown below:

Figure 2: ShowVault-3-NTS

- A ShowVault-4 front panel (without a touchscreen) is shown below:

Figure 3: ShowVault-4

- POWER (PWR): The LED turns green when the unit is powered on.
- HDD Activity (HDD): Red LED blinking indicates access to the Hard Disk Drives.
- The door on the right on all three types of units covers the Power switch and the hard disks that make up the RAID5 storage.

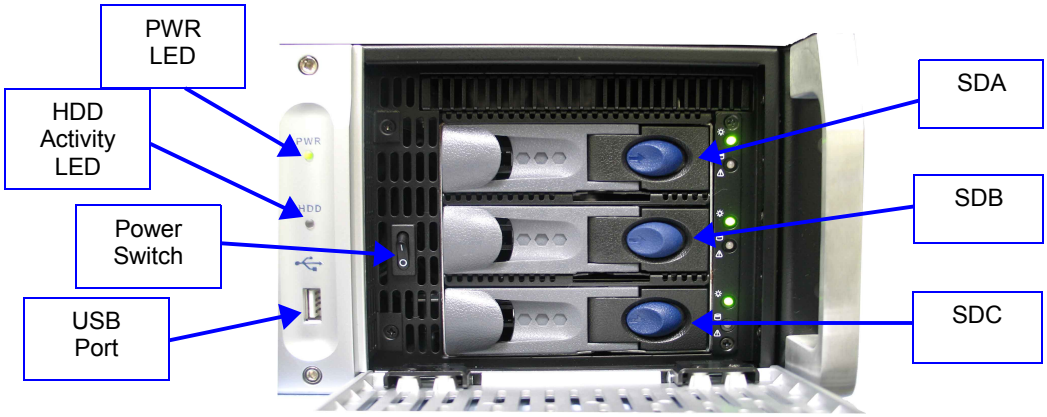


Figure 4: ShowVault-3 / ShowVault-3-NTS with HDD Door Open

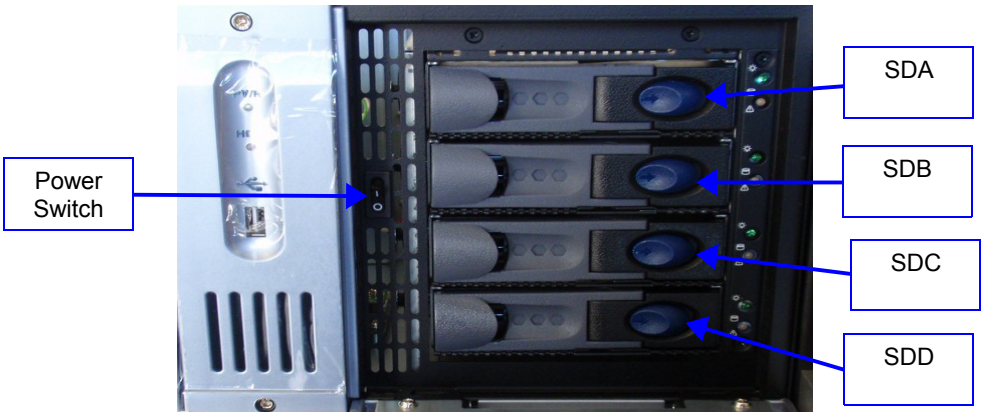


Figure 5: ShowVault-4 with HDD Door Open

- Each HDD has a blue button that allows for unlatching of the drive from the chassis.
- There is one USB 2.0 port on the center of the front panel that can accommodate an external USB device, such as a mouse, keyboard, or USB flash drive.

Figure 6: ShowVault-3 Front Panel LCD Screen

- On the front panel of the ShowVault-3, the LCD can be turned on or off by pressing on the LCD power button using the stylus attached to the front panel. This button is located behind the stylus (Figure 6).

Note: The use of the LCD screen requires that the two rear panel VGA connectors (In / Out) are linked using the VGA cable provided with the ShowVault.

2.2 ShowVault Rear Panel

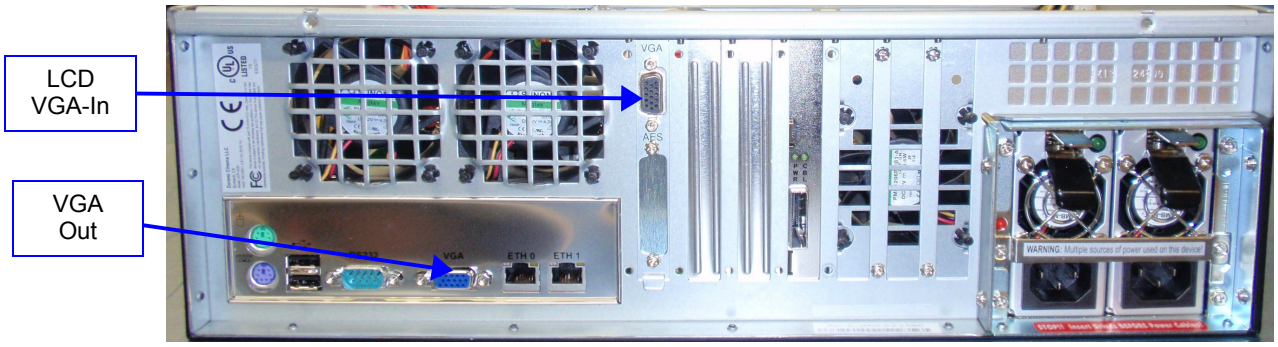


Figure 7: ShowVault-3 Rear Panel

Figure 8: ShowVault-4 Rear Panel

3 Operating System

Every time the user logs out of the Operating System and then logs back in again, a Login Authentication window will appear. The default login name is “doremi” and the Password is “doremi.” However, the administrator may have changed and/or added other login usernames and passwords. Please contact the administrator for the appropriate information.

Figure 9: Login Authentication Window

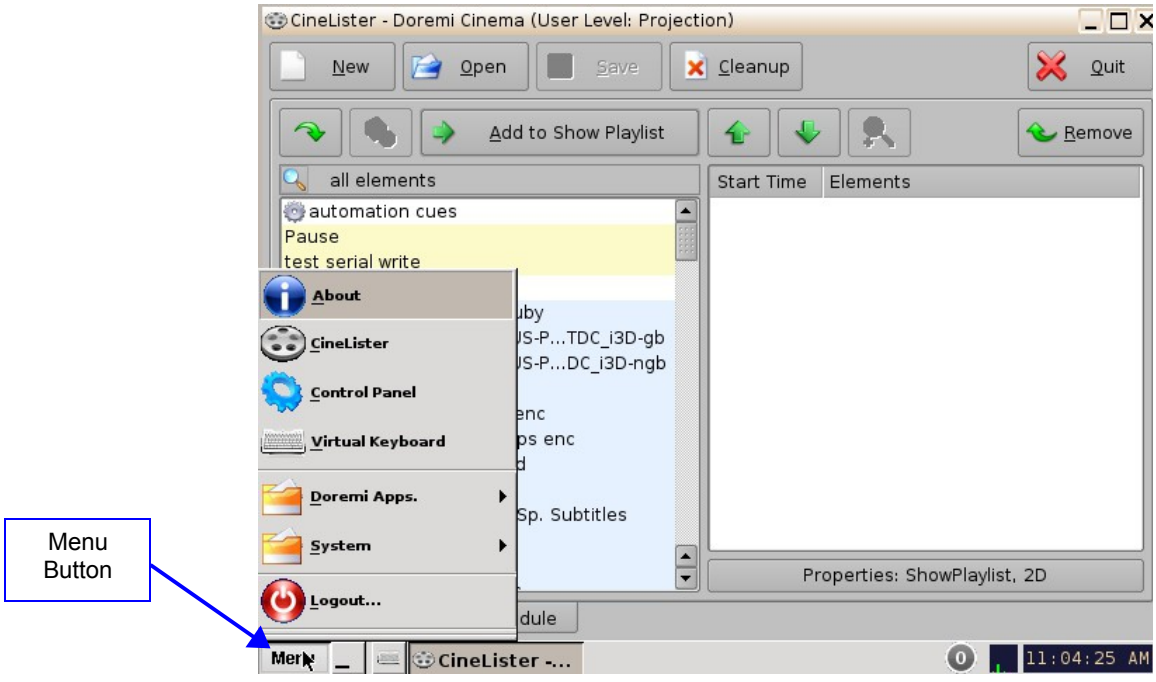


Figure 10: Menu List

- The CineLister application will appear every time the unit is turned on or rebooted. Users can access various applications, as well as the Control Panel, in the Menu (Figure 10).

3.1 Users

The user will be prompted to enter a password for various tasks when using the CineLister application. The administrator determines the level of security.

Note: Please contact the administrator for passwords, not Doremi Labs.

The following are types of passwords the user may be asked for:

- Admin (Administrator)
- Manager
- Root

Note: In Figure 11, the user is asked to verify the username and password.

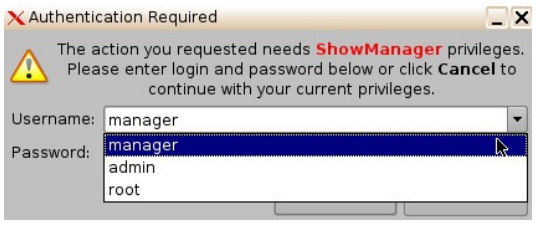


Figure 11: Password Confirmation Window

Note: The server will need authentication to complete certains tasks. For example, the authentication required in the window below is ShowManager privileges, hence the server will automatically prompt the user to the Manager username. However, it is possible to select a different username from the drop-down list as shown in Figure 11 above, depending on the level of security that has been provided.

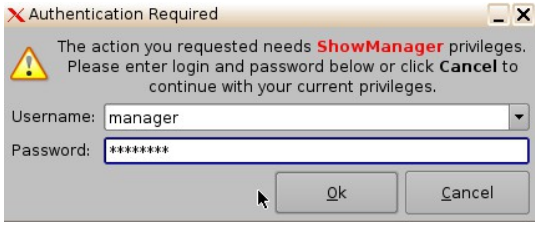


Figure 12: Password Confirmation Window - Manager Username

4 Virtual Keyboard

4.1 How to Access the Virtual Keyboard

- Go to the Menu on the ShowVault home desktop and select Virtual Keyboard.
- The keyboard will appear on the GUI, as illustrated in Figure 13 below.
- Use the keyboard with a stylus pen or by connecting a mouse to the DCP-2000.

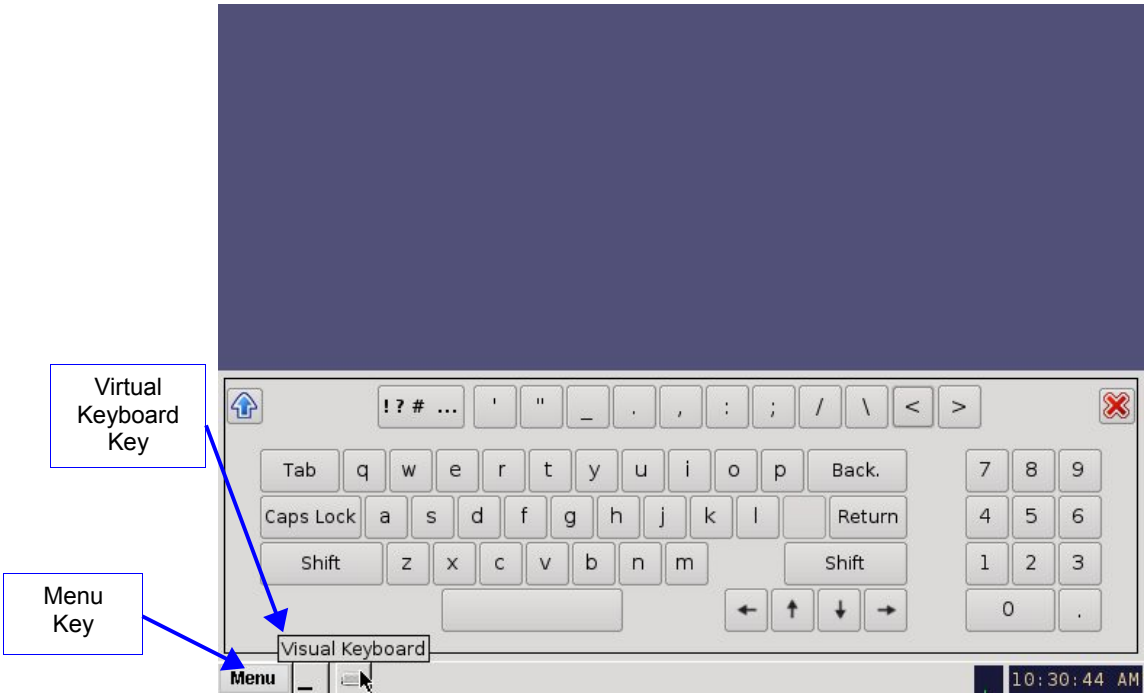


Figure 13: Virtual Keyboard

Note: For earlier versions of the CineLister software, the virtual keyboard is available by going to Menu → System → Legacy Virtual Keyboard.

5 Network Configuration

5.1 Default Network Configuration

All servers are shipped from the factory with a default IP address of 192.168.100.50 on the Ethernet port (Eth1) and a DHCP assigned dynamic IP address on the Ethernet port (Eth0).

5.2 Changing the IP Address

To change the IP address of the server, select Menu → System → Networking Configuration and then follow the steps below:

- A window will appear asking for a password as illustrated below:

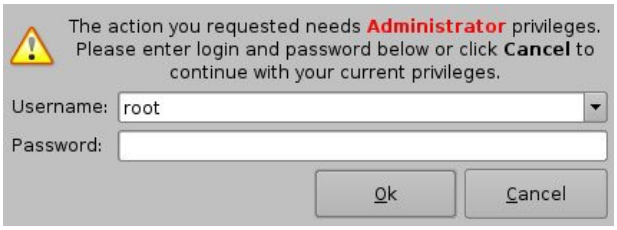

The action you requested needs Administrator privileges.
Please enter login and password below or click Cancel to continue with your current privileges.
Username: root
Password:
Ok
Cancel

Figure 14: Password Confirmation Window

- Follow the steps according to the Ethernet Networking Configuration Wizard.

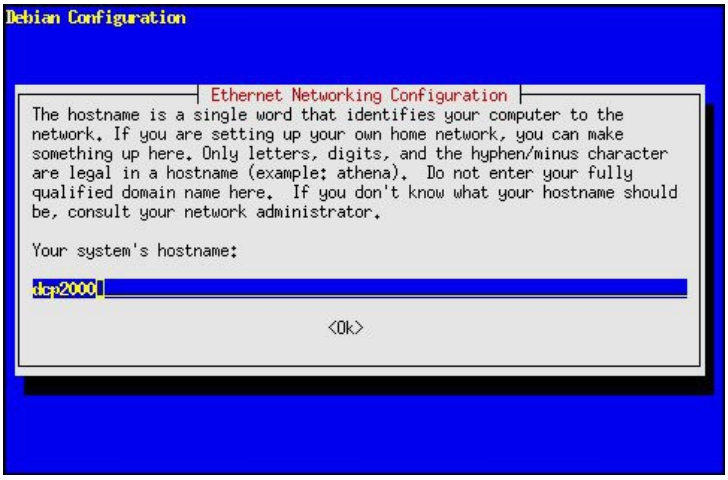

Debian Configuration
Ethernet Networking Configuration
The hostname is a single word that identifies your computer to the network. If you are setting up your own home network, you can make something up here. Only letters, digits, and the hyphen/minus character are legal in a hostname (example: athena). Do not enter your fully qualified domain name here. If you don't know what your hostname should be, consult your network administrator.
Your system's hostname:
dcp2000
<Ok>

Figure 15: Network Configuration

- Press Enter to confirm the configuration of each page of the Ethernet Networking Configuration Wizard. Press Tab to select an option.
- Enter the desired system's hostname and then press Enter.

Note: It is a good idea to put the circuit location/screen number in here. For example, "AMC_bir_scr1," as it will be easier to identify when connecting via VNC and in the logs.

- Enter the desired system domain name and then press Enter.
- Select Yes to set eth0 and then press Enter.
- Select No for Removable Device and then press Enter.
- Select No for Automatically Configure Device with DHCP and then press Enter.

- Enter the desired IP address for eth0 and then press Enter.
- Enter the desired default gateway or leave empty and then press Enter.
- Enter the desired subnet mask and then press Enter.
- Select Yes to configure eth1 and then press Enter.
- Select No for Removable Device and then press Enter.
- Select No for Automatically Configure Device with DHCP and then press Enter.
- Enter the IP address of eth1 and select OK – in the example, enter 192.168.100.50 and then press Enter.

Note: Do not put leading zeros (0) in front of any numbers. For example, do not input 192.168.100.050.

- Enter the desired default gateway or leave empty and then press Enter.
- Enter the desired subnet mask and select OK – in our example, enter the same subnet mask as the projector: 255.255.255.0 and then press Enter.
- Enter the IP Address of the System's Domain Name Server (or leave empty) and then press Enter to exit the wizard.
- To verify the setup, go to Menu → Doremi Apps. → Diagnostic Tool and verify the IP Address under the Diagnostic Tool System Tab.

5.3 Network Restart

If for any reason the network needs to be restarted, use the terminal command line below:

- Type: **/etc/init.d/networking restart** <Enter>

6 Time Zone Configuration

Units are by default set to Pacific Time Zone (PST or PDT). This section provides information on how to check and/or change the time zone.

6.1 Checking the Time Zone

- To confirm that the time zone of the unit is set correctly, open a terminal window by going to the Menu → System → Terminal menu.
- Type: **date** and then press Enter.
- The current date, time, and time zone will be displayed (Figure 16).

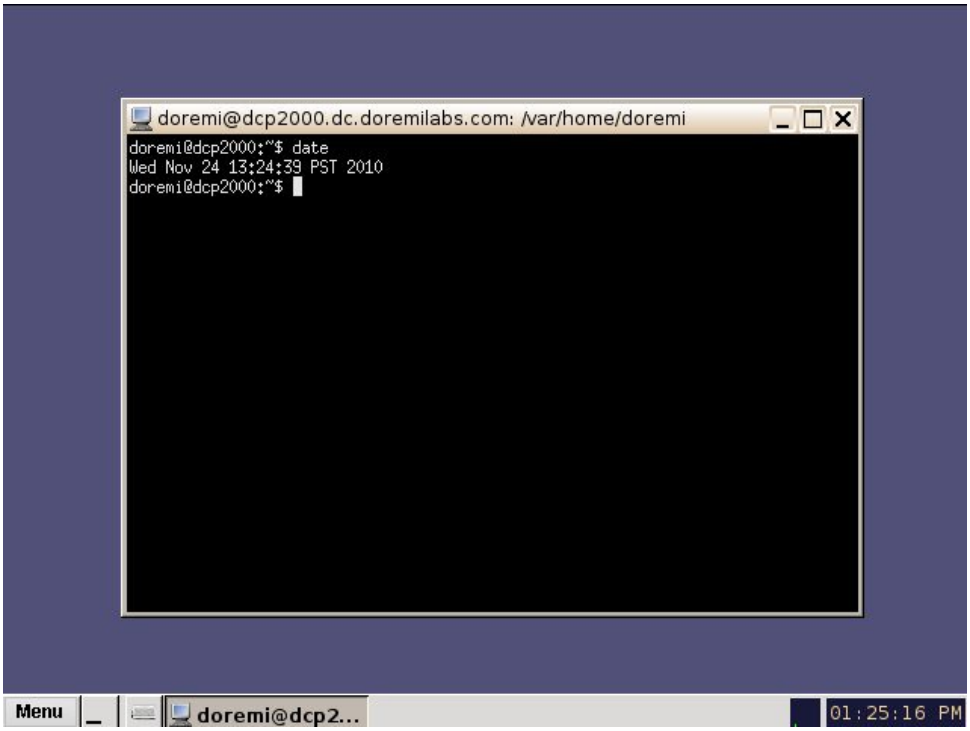


Figure 16: Terminal Window with Date Displayed

6.2 Changing the Time Zone

To change the time zone, follow the steps below in the terminal window (Menu/System/Terminal):

- Type: **su** and then press Enter.
- Type the "root" password to log in as "root" – consult the system administrator to receive the root password or Doremi to know the default root password.
- Type: **rwdo tzconfig** and then press Enter.
- Type: **Yes** (to confirm the change).
- Select the number of the geographic area for the time change (Figure 17).

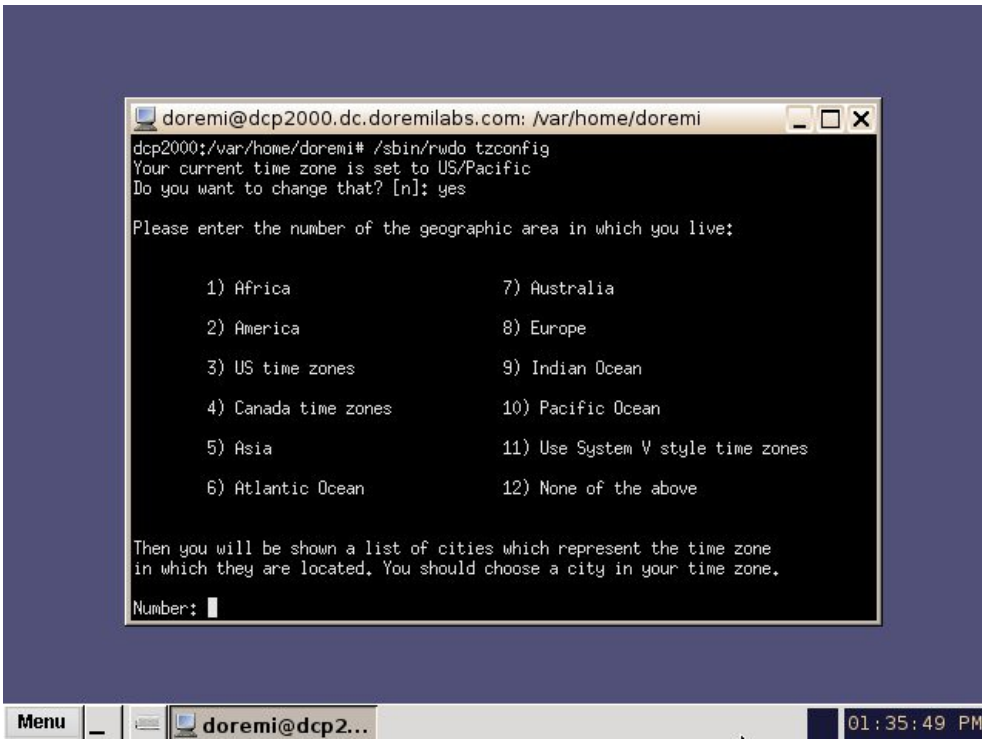

doremi@dcp2000.dc.doremilabs.com: /var/home/doremi
dcp2000:/var/home/doremi# /sbin/rwdo tzconfig
Your current time zone is set to US/Pacific
Do you want to change that? [n]: yes
Please enter the number of the geographic area in which you live:
1) Africa
2) America
3) US time zones
4) Canada time zones
5) Asia
6) Atlantic Ocean
7) Australia
8) Europe
9) Indian Ocean
10) Pacific Ocean
11) Use System V style time zones
12) None of the above
Then you will be shown a list of cities which represent the time zone
in which they are located. You should choose a city in your time zone.
Number:
Menu
doremi@dcp2...
01:35:49 PM

Figure 17: Terminal Window with Time Zone Wizard

- Once the geographic area number has been selected, press Enter.
- Type the name of the city/region of the preferred time zone (e.g., Singapore, Caribbean, PST, etc.).
- Press Enter.
- After typing the city/region, the unit will now be set to the desired configuration.
- Exit the terminal window.

7 Control Panel

- To access the Control Panel window, go to Menu and click on Control Panel.
- The following window will appear:

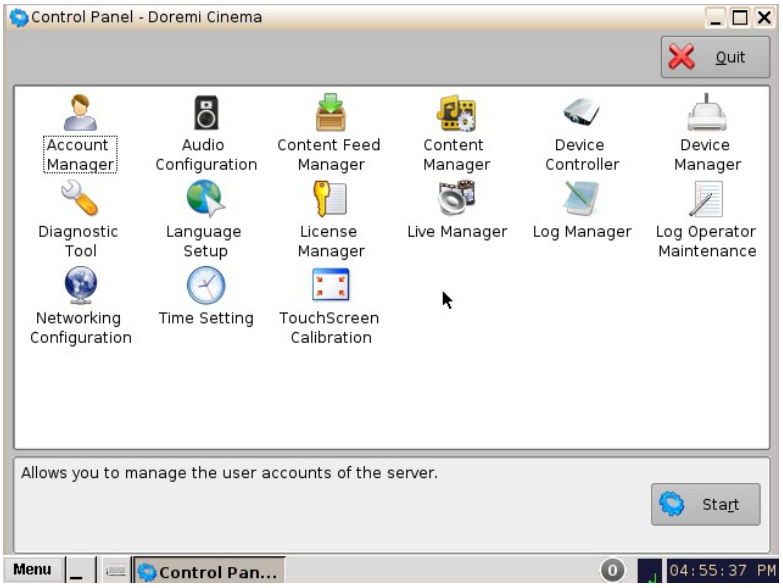


Figure 18: Control Panel Window

- The Control Panel window provides access to various applications as listed belo. See Figure 18 above for more information.
- Account Manager: Allows the user to add/remove/edit user accounts.
- Audio Configuration: Allows the user to route all audio tracks to operator-designated outputs (only SMPTE content).
- Content Feed Manager: Allows the user to add an FTP ingest server.
- Content Manager: Allows the user to browse, manage and export all the content available on the player including: ShowPlaylists, CPLs, KDMs, and Doremi Licenses.
- Device Controller: Allows the user to create/edit/register devices in a simplified manner.
- Device Manager: Allows the user to add different projectors, close caption devices, subtitle devices, etc.
- Diagnostic Tool: Provides the user with Diagnostic information about the system. See the document, “Diagnostic Tool User Guide.”
- Language Setup window: Allows the user to change the language used on the unit.
- License Manager: Displays and manages software licenses installed on the unit.
- Live Manager: Allows the user to create a device as source of live events.
- Log Manager: Allows the user to automatically configure SMPTE and System logs.

- Log Operator Maintenance: Allows the user to log important information (e.g., hard disk replacement, projector lamp replacement, etc.). This application helps the system administrator keep track of any change operated in a theater booth.
- Network Configuration: Set up and modify network connections.
- Time Setting: Due to DCI requirements, users can only set the time to no more than 30 minutes per calendar year on a Dolphin DCI FIPS 1.0 board. For Dolphin DCI FIPS 1.2 boards, the user can only adjust the RTC (Real Time Clock) time within DCI allowed-time of 6 minutes per calendar year.
- Touch Screen Calibration: Initiates the touch screen calibration process (only applicable to models with a touchscreen).

7.1 Account Manager GUI

- To access the Account Manager GUI, double-click on the Account Manager icon within the Control Panel window or select it and click the Start button located on the right-side of the Control Panel window.

- Input the appropriate password to continue and press the Ok button.

Authentication Required
The action you requested needs SuperUser privileges.
Please enter login and password below or click Cancel to continue with your current privileges.
Username: admin
Password:
Ok
Cancel

Figure 19: Password Confirmation Window

- The following window will appear:

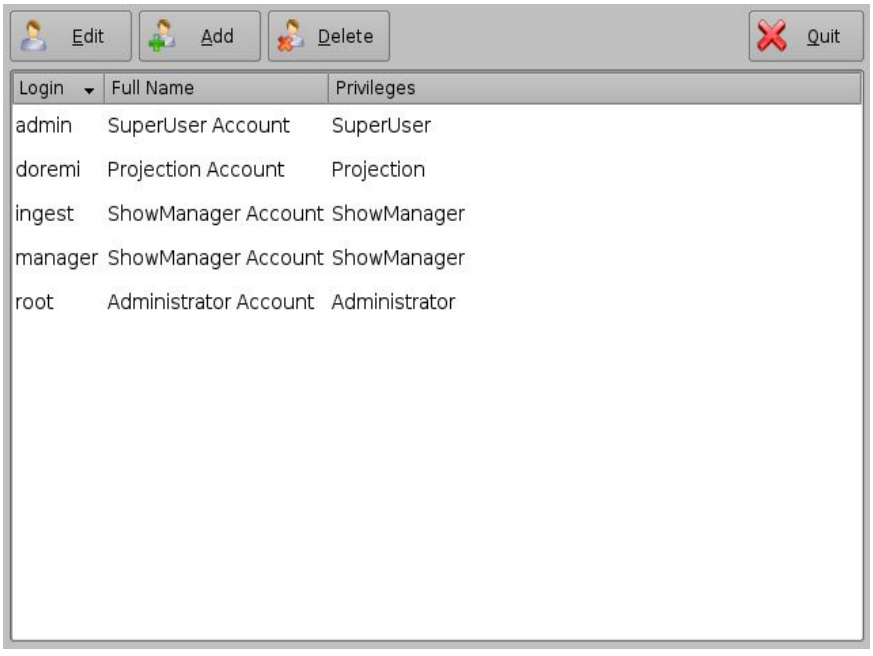


Figure 20: Account Manager GUI

- The Account Manager GUI allows the user to edit, add, and delete user accounts (Figure 20).

7.1.1 Add a New User Account

- To add a new user account, click the Add button (Figure 20).
- The following window will appear:

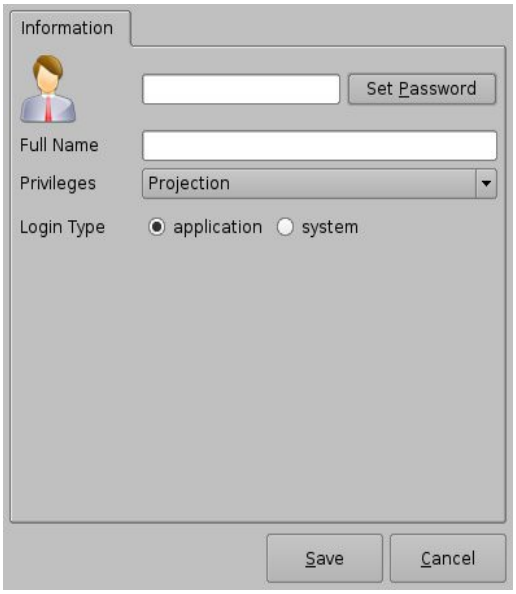


Figure 21: Account Manager GUI – New User Addition

- Enter the username (to be used for log in) in the upper empty field and the associated full name used to describe the user. Both names will be displayed in the Control Panel window after the new user addition is completed.
- Define the password by clicking the Set Password button.
- The following window will appear:

Figure 22: Password Definition Window

Note: The user will be provided information about the strength of the chosen password. Click the Set button when the appropriate password is defined. Confirm the password in the Confirm field. The user privileges need to be defined using the list-box.

- Click the Set button to save the new password.

- Select the proper privileges. They are listed below from the lowest level to the highest level of privileges:
- **Projectionist**: Projectionist is a standard user allowed to use the Doremi applications present on the unit without changing the configuration.
- **Show Manager**: In addition to Projectionist's privileges, a Show Manager user is allowed to ingest and delete content.
- **SuperUser**: In addition to Show Manager's right, a SuperUser has the privileges to configure the unit. For example, the SuperUser can update the firmware and software.
- **Administrator**: An Administrator user will be considered a “root” user. The Administrator can perform all of the privileges listed above in addition to creating, modifying, and deleting user accounts.

Figure 23: Account Manager GUI – Privileges Definition

- Furthermore, two different log in types are available for the user:
    - Application: Virtual user account only works with Doremi applications.
    - System: Regular Linux user account that can be used anywhere on the system. For example, on Linux terminal windows.
- Select the proper user account type and click the Save button.
- The new user account will be visible in the main Account Manager GUI as illustrated below:

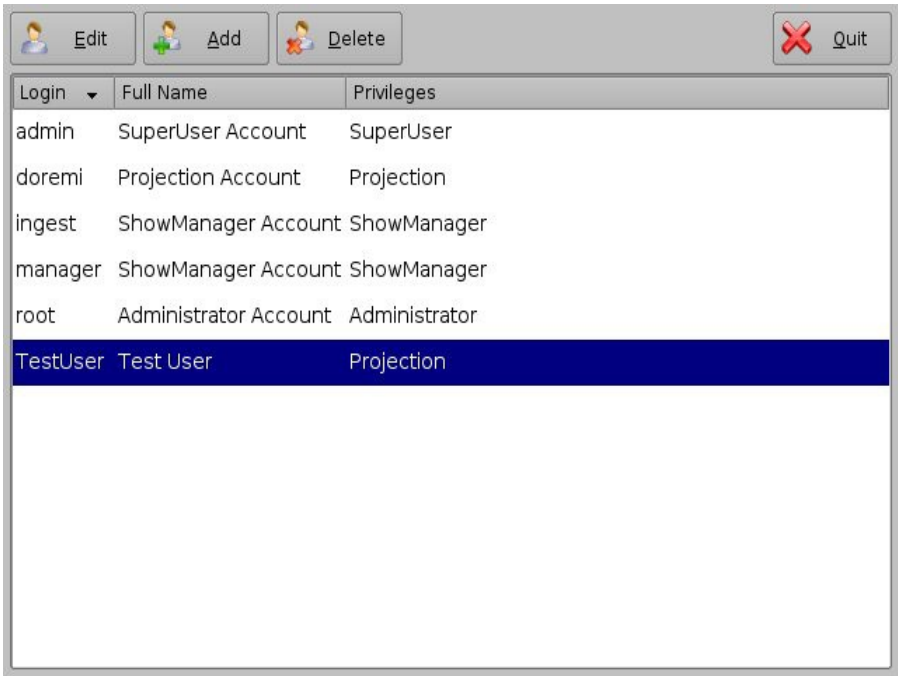


Figure 24: Account Manager GUI – New User Added

7.1.2 Edit an Existing User Account

- To edit an existing user account, select it within the Account Manager GUI and click the Edit button.
- The following dialog box will appear allowing the user to edit the user properties but not the username or the log in type.

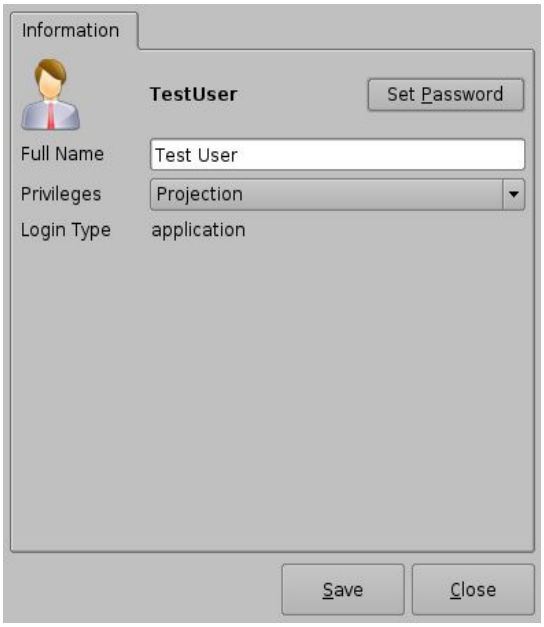


Figure 25: Account Manager GUI – User Properties Editing

- Click the Save button when finished editing the settings (Figure 25).
- Click the Close button when finished with the configuration (Figure 25).

7.1.3 Delete an Existing User Account

- To delete an existing user account, select it within the main Account Manager GUI and click the Delete button.
- The user will be asked for a confirmation. Clicking Yes will delete the user account.

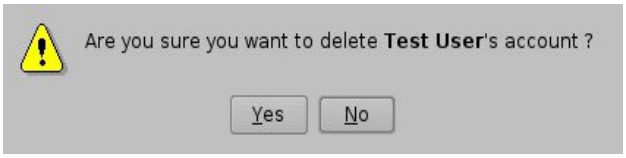


Figure 26: User Account Deletion Confirmation

7.2 Audio Configuration

- The Audio Configuration application allows the user to route all audio tracks in an SMPTE/Interop package to operator-designated outputs. The main purpose of the mapping is to allow users to move the HI or VI channels to a specific output. The Audio Configuration application is available in the Control Panel.
- To open the Audio Configuration application, go to Menu → Control Panel → Audio Configuration (Figure 27).

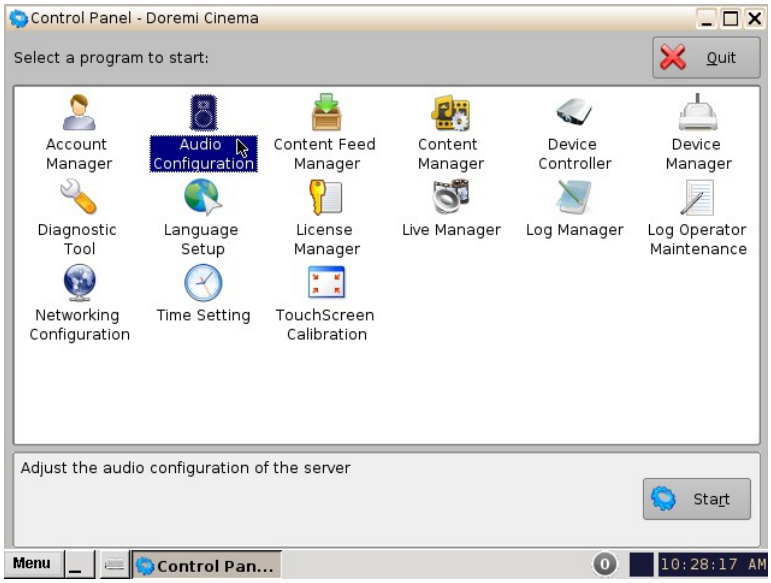


Figure 27: Control Panel with Audio Configuration Icon Selected

- An “admin” password and confirmation will be needed to perform the operation.
- The Audio Configuration window will appear.

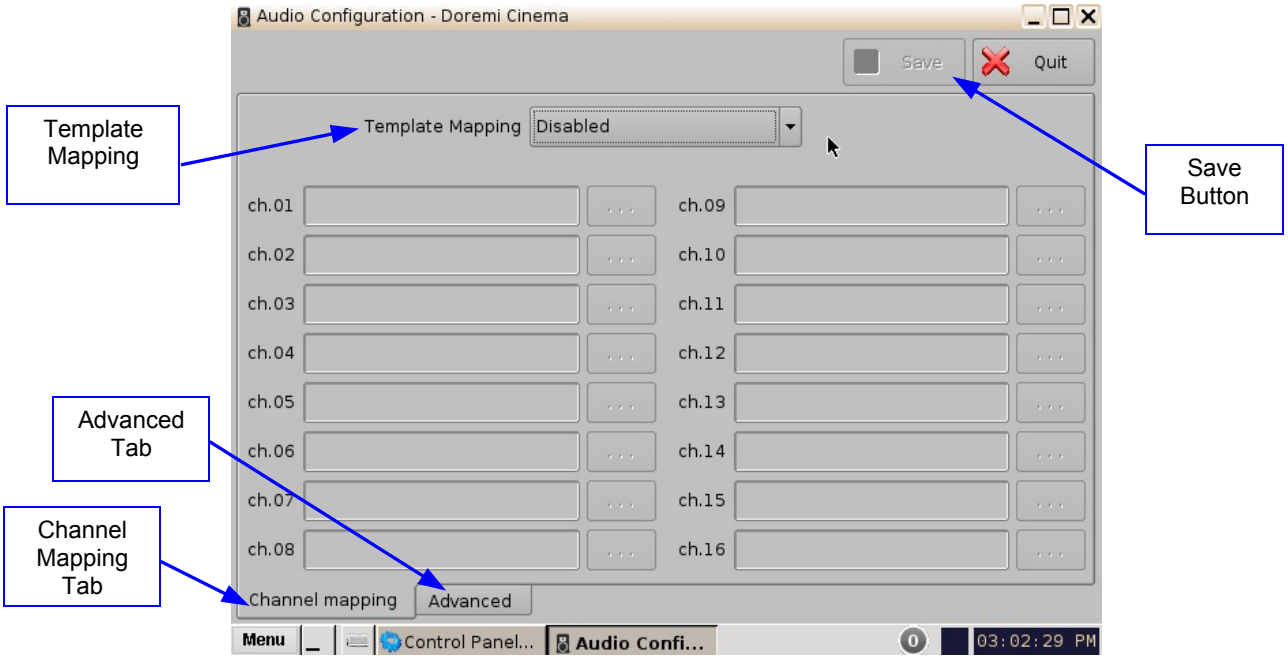


Figure 28: Audio Configuration - Default Setting

- When first launched, the Audio Configuration application opens in the Channel Mapping tab. The Template Mapping will be set to Disabled (Figure 28).

Note: All the templates, except Disabled, can be modified directly instead of having to select Custom. Once the template is edited, the Template Mapping will read Custom.

- Available configurations include:
- Disabled: This setting is the default and as such cannot be mapped (Section 7.2.1.1).
- 4 channels: This is a pre-set configuration
- 6 channels: This is a pre-set configuration
- 7 channels: This is a pre-set configuration
- 8 channels: This is a pre-set configuration
- 9 channels: This is a pre-set configuration
- ISDCF: This is a pre-set configuration
- Custom: This setting allows the user to create his/her own custom audio configuration.

7.2.1 Channel Mapping Tab

7.2.1.1 Disabled Configuration

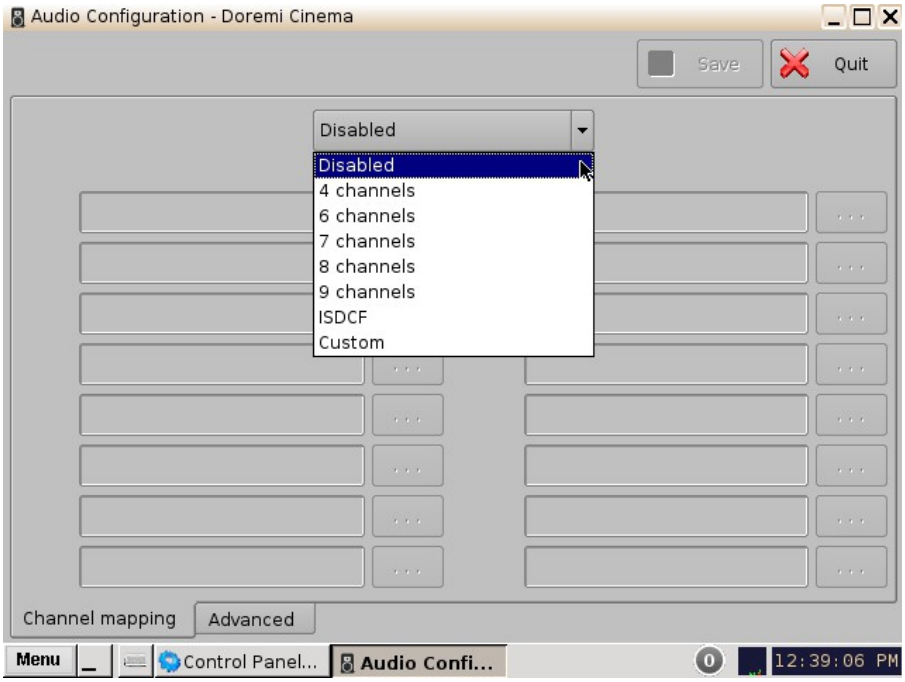


Figure 29: Disabled Configuration

- Disabled: This setting is the default and as such cannot be mapped. The Disabled mapping configuration will perform pass-through mapping, meaning channel number "X" of the CPL audio track will be routed to audio output number "X" (variable) of the server. "X" being a number between 1 and 16. When the configuration is grayed-out, the user cannot change the configuration.

7.2.1.2 Pre-Defined Mapping Configurations

7.2.1.2.1 4 Channels

- This configuration is defined as follows (Figure 30):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is Input**: ch.04 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”
- **ch.05 is Surround (S)**: Output ch.05 will be playing the CPL's Surround (S) audio channel.
- **ch.06 – ch.14:** These channels are pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.” “X” will be a value between 6 and 14.
- **ch.15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.16 is VI**: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

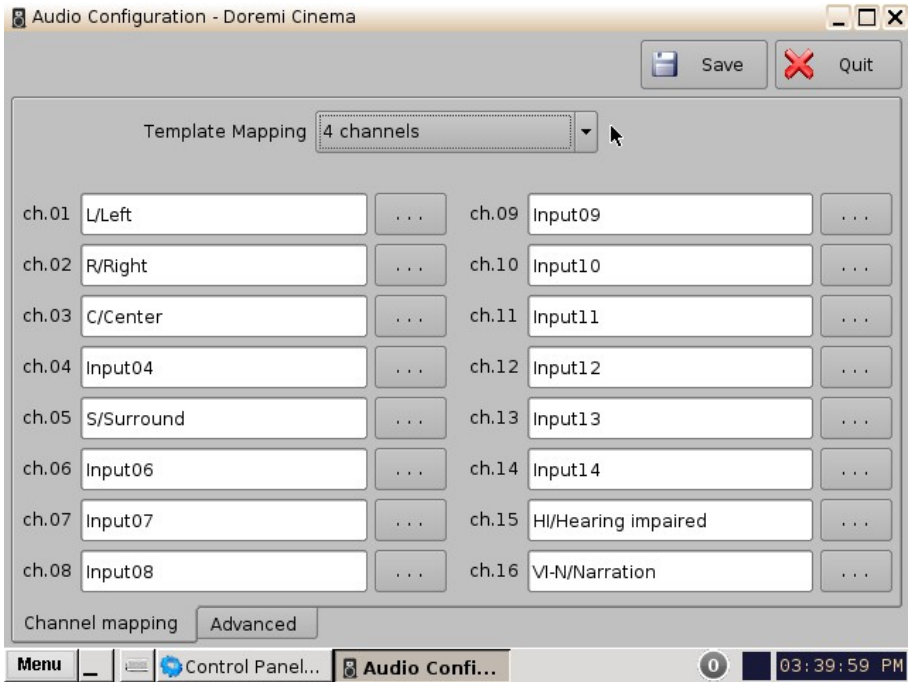


Figure 30: Audio Mapping Set to 4 Channels

7.2.1.2.2 6 Channels

- This configuration is defined as follows (Figure 31):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is LFE/Screen (Sub-Woofer)**: Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **ch.05 is Left Surround (Ls)**: Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **ch.06 is Right Surround (Rs)**: Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **ch.07 – ch.14:** These channels are pass-through, meaning the output channel "X" will be playing the CPL's audio channel "X." "X" will be a value between 7 and 14.
- **ch.15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.16 is VI**: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

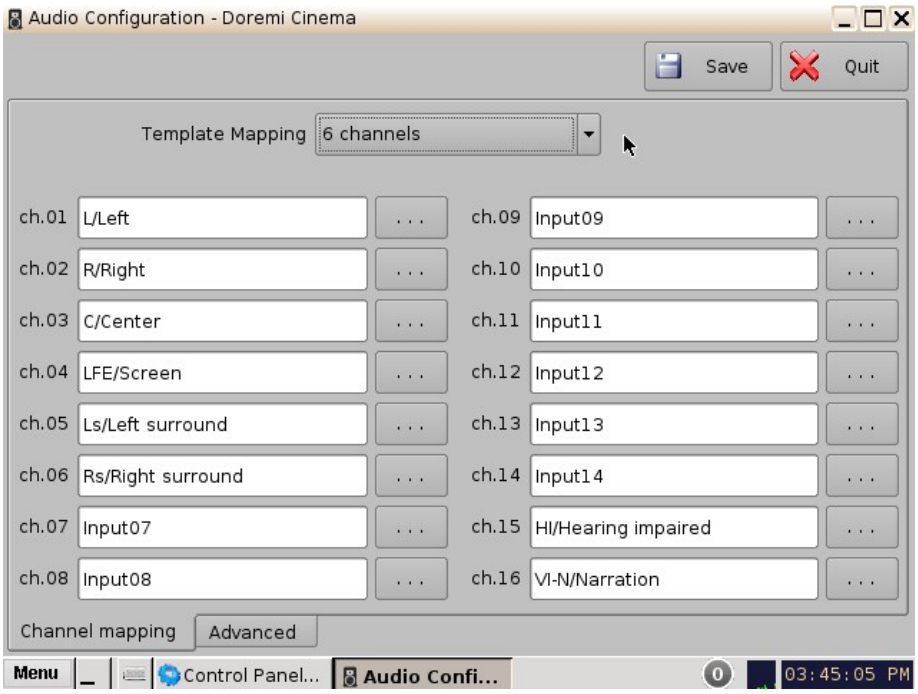


Figure 31: Audio Mapping Set to 6 Channels

7.2.1.2.3 7 Channels

- This configuration is defined as follows (Figure 32):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is LFE/Screen (Sub-Woofer)**: Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **ch.05 is Left Surround (Ls)**: Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **ch.06 is Right Surround (Rs)**: Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **ch.07 is Input**: ch.07 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”
- **ch.08 is Input**: ch.08 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”
- **ch.09 is Center Surround (Cs)**: Output ch.09 will be playing the CPL's Center Surround (Cs) audio channel.
- **ch.10 – ch.14:** These channels are pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.” “X” will be a value between 10 and 14.
- **ch.15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.16 is VI**: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

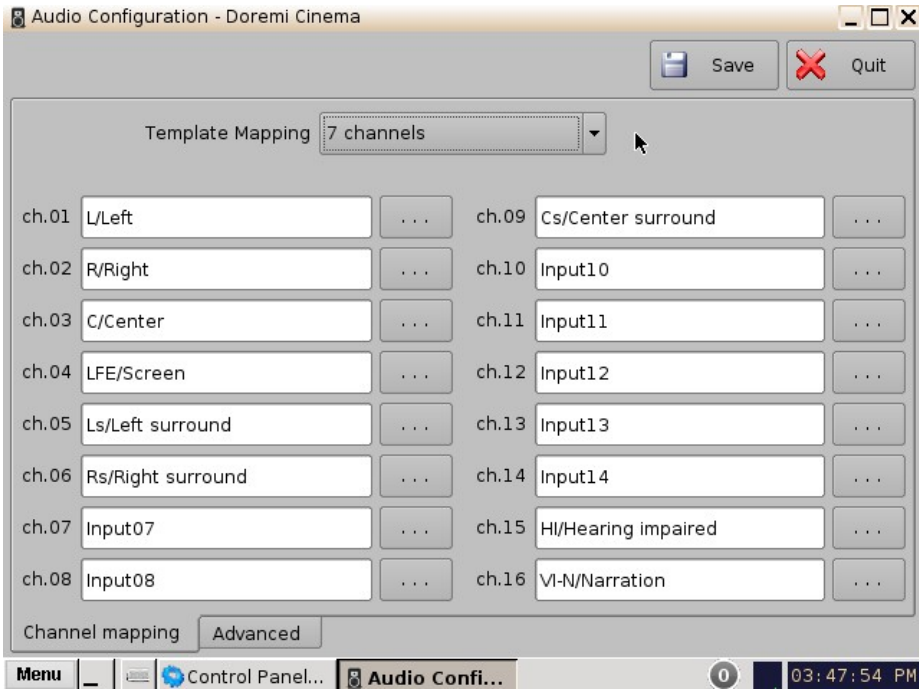


Figure 32: Audio Mapping Set to 7 Channels

7.2.1.2.4 8 Channels

- This configuration is defined as follows (Figure 33):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is LFE/Screen (Sub-Woofer)**: Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **ch.05 is Left Surround (Ls)**: Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **ch.06 is Right Surround (Rs)**: Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **ch.07 is Left Center (Lc)**: Output ch.07 will be playing the CPL's Left Center (Lc) audio channel.
- **ch.08 is Right Center (Rc)**: Output ch.08 will be playing the CPL's Right Center (Rc) audio channel.
- **ch.9 – ch.14:** These channels are pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.” “X” will be a value between 9 and 14.
- **ch.15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.16 is VI**: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

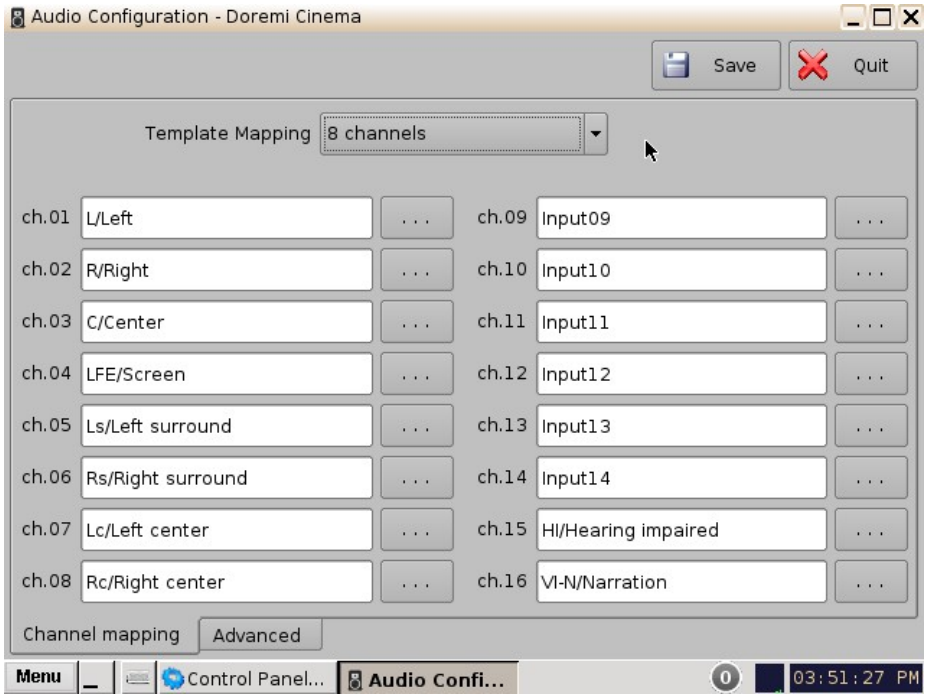


Figure 33: Audio Mapping Set to 8 Channels

7.2.1.2.5 9 Channels

- This configuration is defined as follows (Figure 34):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is LFE/Screen (Sub-Woofer)**: Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **ch.05 is Left Surround (Ls)**: Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **ch.06 is Right Surround (Rs)**: Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **ch.07 is Left Center (Lc)**: Output ch.07 will be playing the CPL's Left Center (Lc) audio channel.
- **ch.08 is Right Center (Rc)**: Output ch.08 will be playing the CPL's Right Center (Rc) audio channel.
- **ch.09 is Center Surround (Cs)**: Output ch.09 will be playing the CPL's Center Surround (Cs) audio channel.
- **ch.10 – ch.14:** These channels are pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.” “X” will be a value between 10 and 14.
- **ch.15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.16 is VI**: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

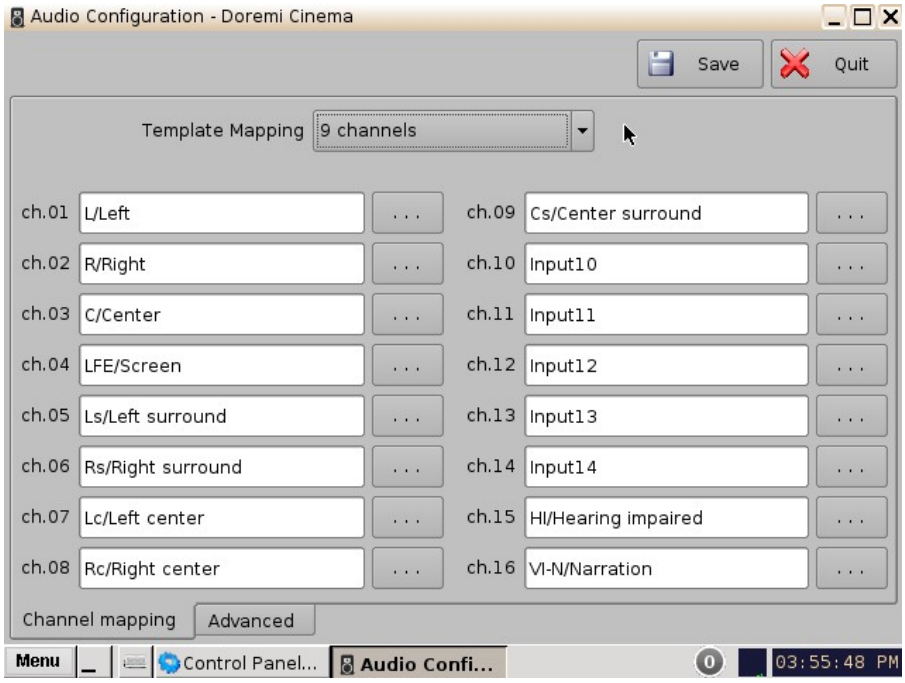


Figure 34: Audio Mapping Set to 9 Channels

7.2.1.2.6 ISDCF

- This configuration is defined as follows (Figure 35):
- **ch.01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- **ch.02 is Right (R)**: Output ch.02 will be playing the CPL's Right (R) audio channel.
- **ch.03 is Center (C)**: Output ch.03 will be playing the CPL's Center (C) audio channel.
- **ch.04 is LFE/Screen (Sub-Woofer)**: Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **ch.05 is Left Surround (Ls)**: Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **ch.06 is Right Surround (Rs)**: Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **ch.07 is HI**: Output ch.07 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **ch.08 is VI**: Output ch.08 will be playing the CPL's Narration (VI) audio channel.
- **ch.09 is Left Center (Lc)**: Output ch.09 will be playing the CPL's Left Center (Lc) audio channel.
- **ch.10 is Right Center (Rc)**: Output ch.10 will be playing the CPL's Right Center (Rc) audio channel.
- **ch.11 is Left Rear Surround (Lrs)**: Output ch.11 will be playing the CPL's Left Rear Surround (Lrs) audio channel.
- **ch.12 is Right Rear Surround (Rrs)**: Output ch.12 will be playing the CPL's Right Rear Surround (Rrs) audio channel.
- **ch.13 is Input**: ch.13 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”
- **ch.14 is Input**: ch.14 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”

- **ch.15 is Input**: ch.15 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”
- **ch.16 is Input**: ch.16 is pass-through, meaning the output channel “X” will be playing the CPL's audio channel “X.”

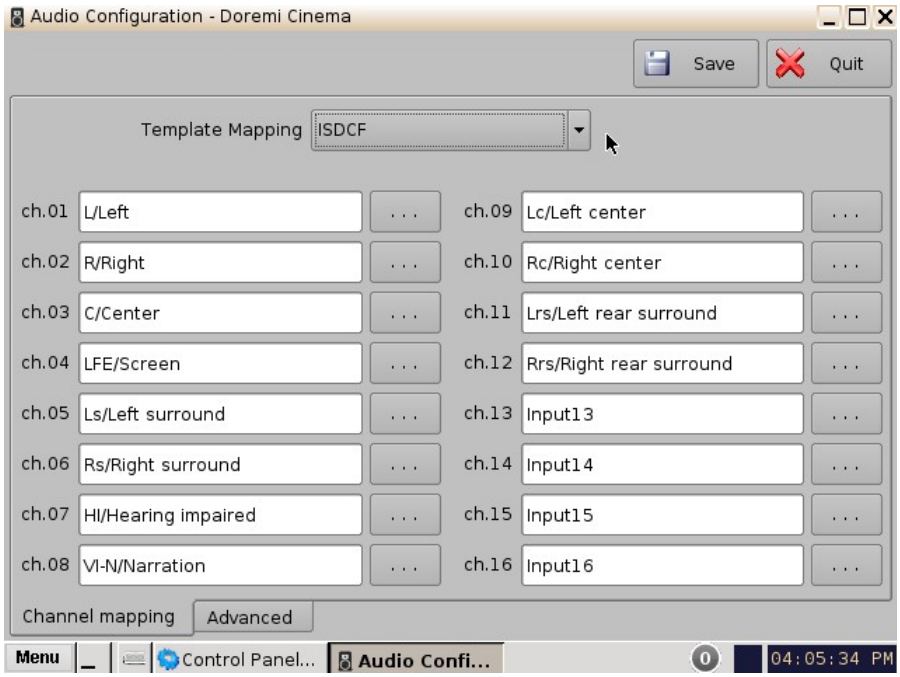


Figure 35: Audio Mapping Set to ISDCF

7.2.1.3 Custom Mapping Configuration

- Click on the drop-down menu and select Custom.
- The following window will appear.

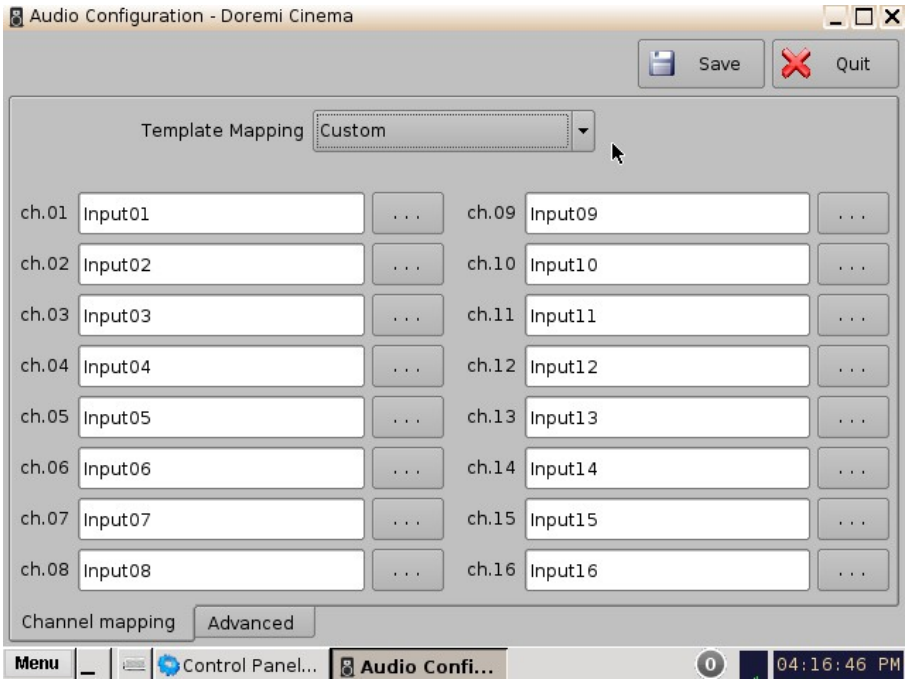


Figure 36: Custom Mapping

- Click on the Browse button ("...") for each output channel (ch.01-ch.16) to select the CPL's audio channel, using its label, that is to be routed.

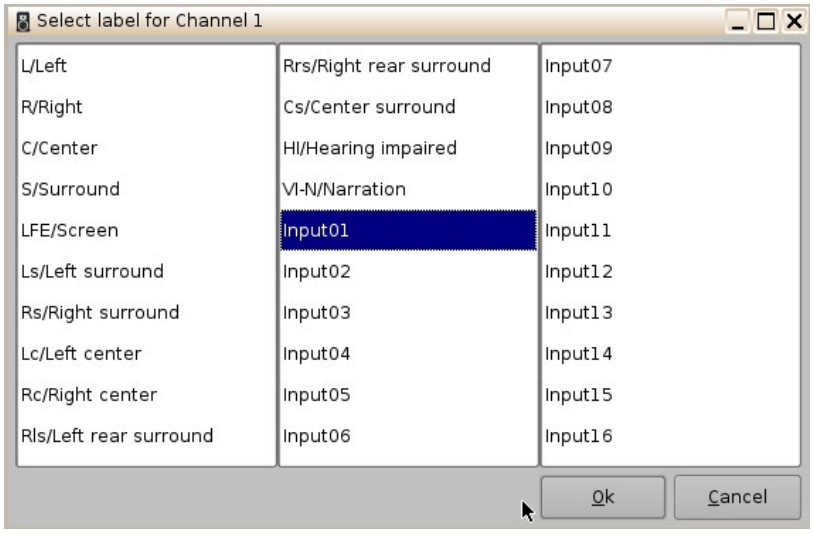


Figure 37: Custom Mapping Parameters

7.2.2 Advanced Tab

- This tab allows the user to add a delay between audio and video by dragging the cursor to the desired delay on the graphical cursor that allows values between -200 milliseconds and 200 milliseconds. All audio tracks will get the same delay. The user cannot add separate delays for each track. After the delay has been configured, click on the Save button to save the audio delay. The selected audio delay is shown in numeric characters below the cursor field.

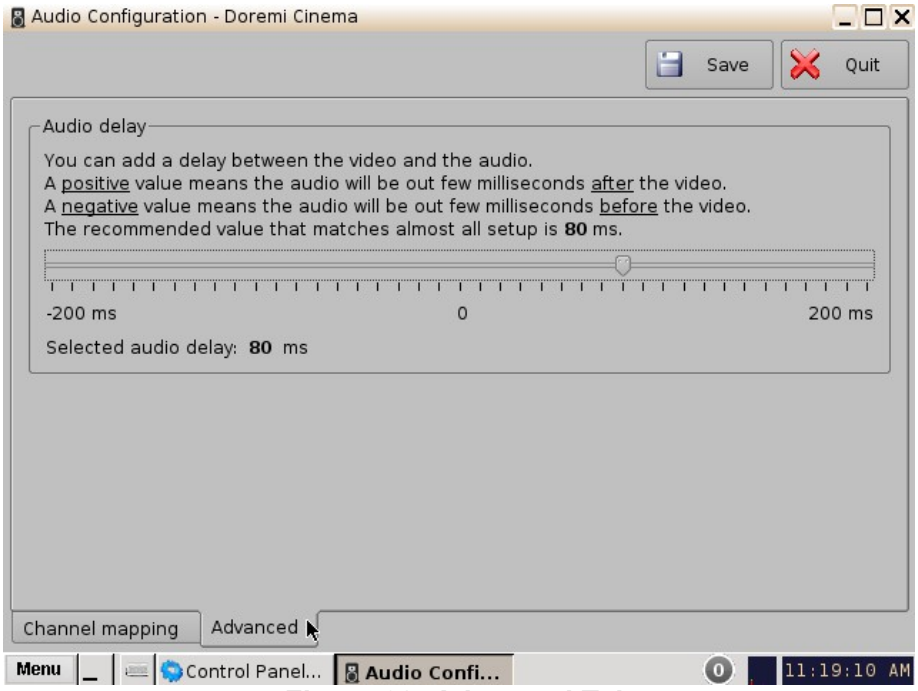

Audio Configuration - Doremi Cinema
Save
Quit
Audio delay
You can add a delay between the video and the audio.
A positive value means the audio will be out few milliseconds after the video.
A negative value means the audio will be out few milliseconds before the video.
The recommended value that matches almost all setup is 80 ms.
-200 ms
0
200 ms
Selected audio delay: 80 ms
Channel mapping
Advanced
Menu
Control Panel...
Audio Confi...
11:19:10 AM

Figure 38: Advanced Tab

- Positive Value: The audio will be heard behind the video action.
- Negative Value: Indicates that the audio is ahead of the video action.

- The recommended value that matches almost all setups is 80 milliseconds.

7.2.3 SMPTE Packages

Note*:* The audio selection should reflect the audio package in number of audio channels.

- Change the Template Mapping setting by clicking on the list-menu and selecting the desired setting (Figure 29).
- Make sure to click the Save button to ensure the configuration is saved (Figure 28).
- The list of possible labels that can be routed (if present in the audio MXF file) are defined by SMPTE as follows:
    - L/Left
    - R/Right
    - C/Center
    - LFE Screen
    - Ls/Left surround
    - Rs/Right surround
    - Lc/Left center
    - Rc/Right center
    - Cs/Center surround
    - Rrs/Right rear surround
    - Lrs/Left rear surround
    - HI/Hearing Impaired
    - VI-N/Visual Impaired-Narration

7.2.4 Interop Packages

- Interop audio MXF files do not contain any channel label information. Therefore, if a configuration is selected, the routing will be executed as if the audio MXF file was created according to the ISDCF audio mapping recommendations, which currently consists of:

Channel in package	Configuration			Notes
	5.1	7.1 SDDS	7.1 DS	
1	L	L	L	Left
2	R	R	R	Right
3	C	C	C	Center
4	LFE	LFE	LFE	Screen low frequency effects
5	Ls	Ls	Lss	Left surround (or left side surround)
6	Rs	Rs	Rss	Right surround (or right side surround)
7	HI			Hearing impaired (with emphasis on dialog)
8	VI-N			Visually impaired narrative (audio description)
9	--	Lc	--	Left center
10	--	Rc	--	Right center
11	-- --	--	Lrs	Left rear surround
12	-- --	--	Rrs	Right rear surround
13	Motion Data			Synchronous signal (currently used by D-Box)
14	--			*Unused at this time*
15	--			*Unused at this time*
16	--			*Unused at this time*

Figure 39: ISDCF – Interop Recommendations

7.3 Content Feed Manager

- The main purpose of the Content Feed Manager application is to add an FTP ingest source. In addition, multiple units can be interconnected to share content simultaneously. The Content Feed Manager makes the ingestion process quicker and simpler. This same procedure is available in the document, "Content Feed Manager GUI User Manual," which is document number D2K.OM.001597.DRM.

7.3.1 Quick Configuration

- To open the Content Feed Manager application, go to Menu →Control Panel and double-click on the Content Feed Manager icon (Figure 40).

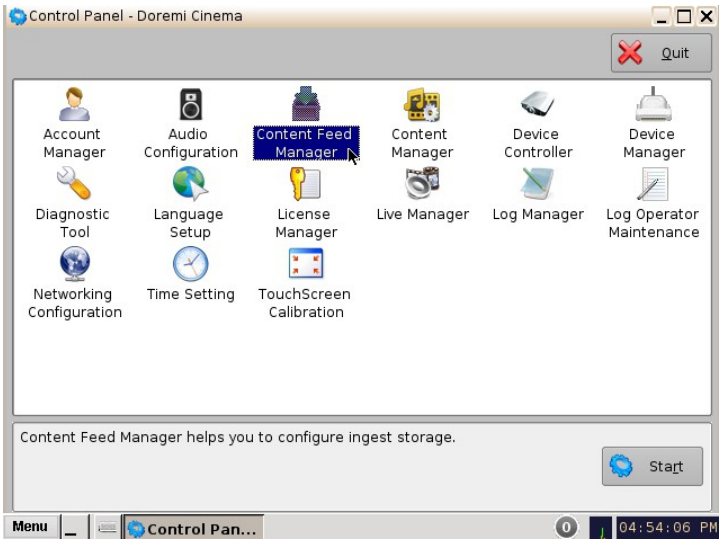


Figure 40: Control Panel with Content Feed Manager Icon Selected

- The user will need to authenticate themselves as "admin" by inputting the correct password to be allowed to use this application.

Authentication Required
The action you requested needs SuperUser privileges.
Please enter login and password below or click Cancel to continue with your current privileges.
Username: admin
Password:
Ok
Cancel

Figure 41: Password Confirmation Window

- When the Content Feed Manager is started for the first time, it will be appear as illustrated below:

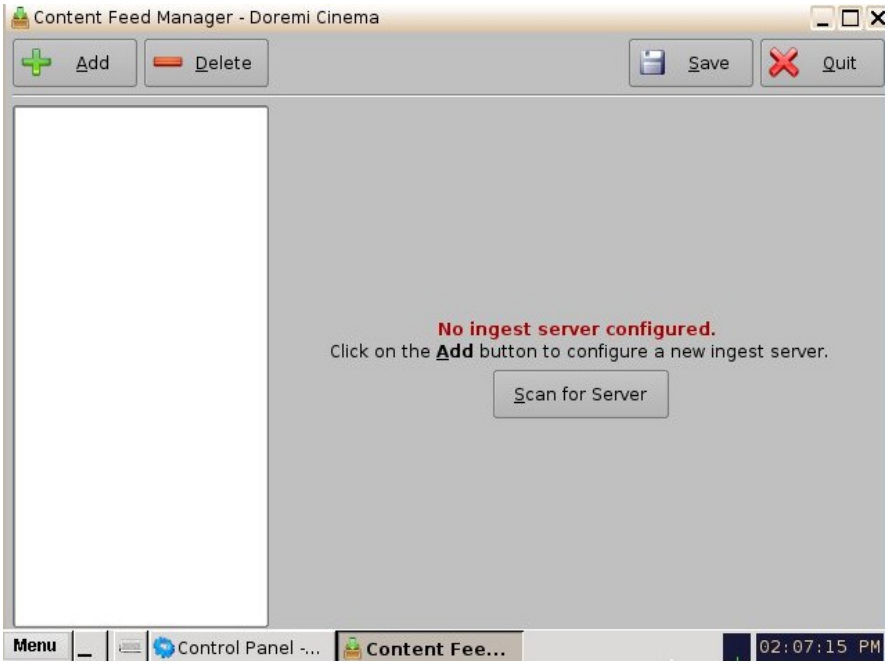


Figure 42: Content Feed Manager GUI

7.3.2 Scan for Server

- Click the Scan for Server button to check and see if any servers are present on the network. The following window will appear displaying the unit type, e-S/N, and IP as well (Figure 43):
- Qualifications for a server include: all DCPs, ShowVaults, and TMS units that have an IP address and are connected within the same networks with the concerned unit (destination). The units can be used as sources for material.

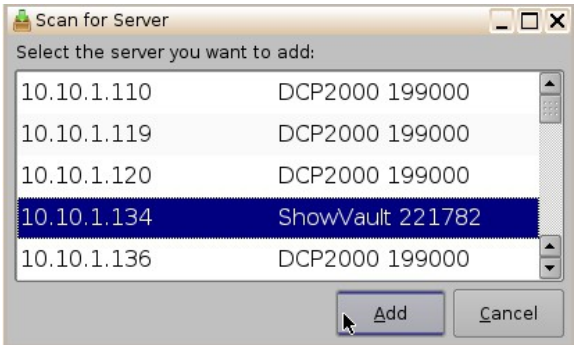


Figure 43: Scan for Server Button

- Scroll and select the server, then click the Add button (Figure 43). Once the server has been selected the Content Feed Manager GUI will automatically be updated with the default credentials.

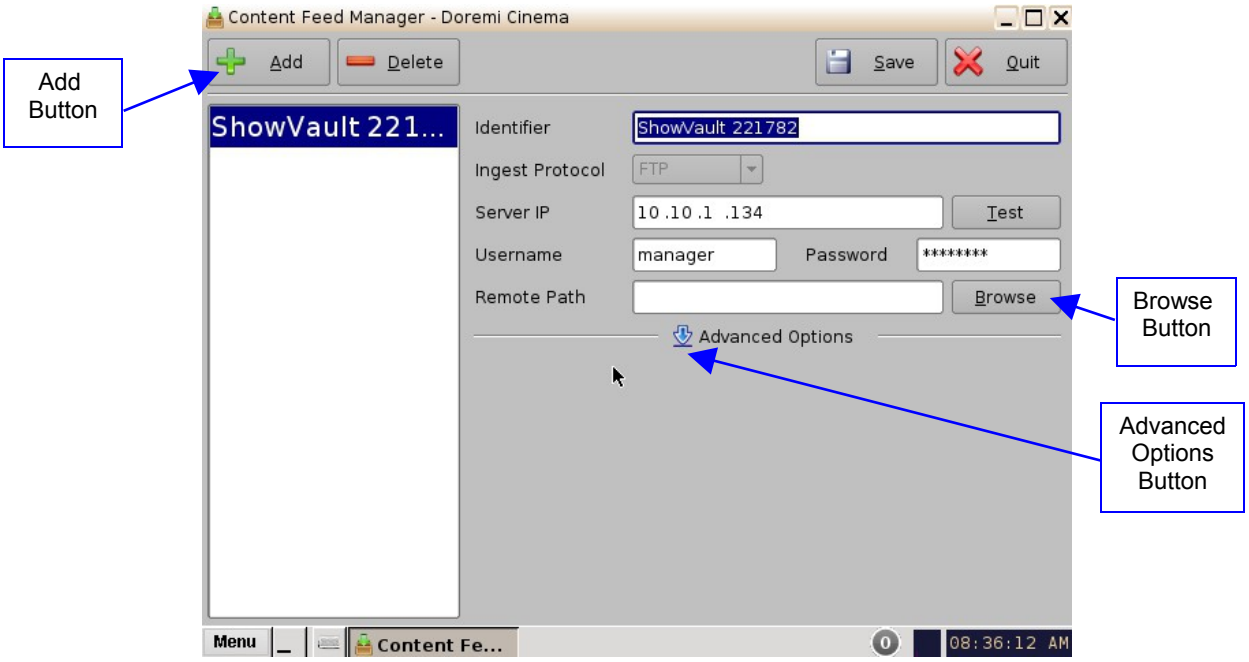


Figure 44: Automatically Updated Server

- The Identifier field identifies the server and can be renamed for the user's convenience.
- The Ingest Protocol field allows the user to select the transfer protocol. Currently, only FTP is supported.
- Once the server is selected, the IP field will automatically be populated.
- Click on the Test button to determine if the unit is available in the network once it has been selected.
- Username and Password fields are for security purposes.
- The Remote Path field is for the destination of the server. It is not needed when using the Scan for Server method.
- Click on the Save button to save this configuration for the Content Feed Manager. The unit is now confirmed as an ingest source for our destination unit.

7.3.3 Advanced Options Button

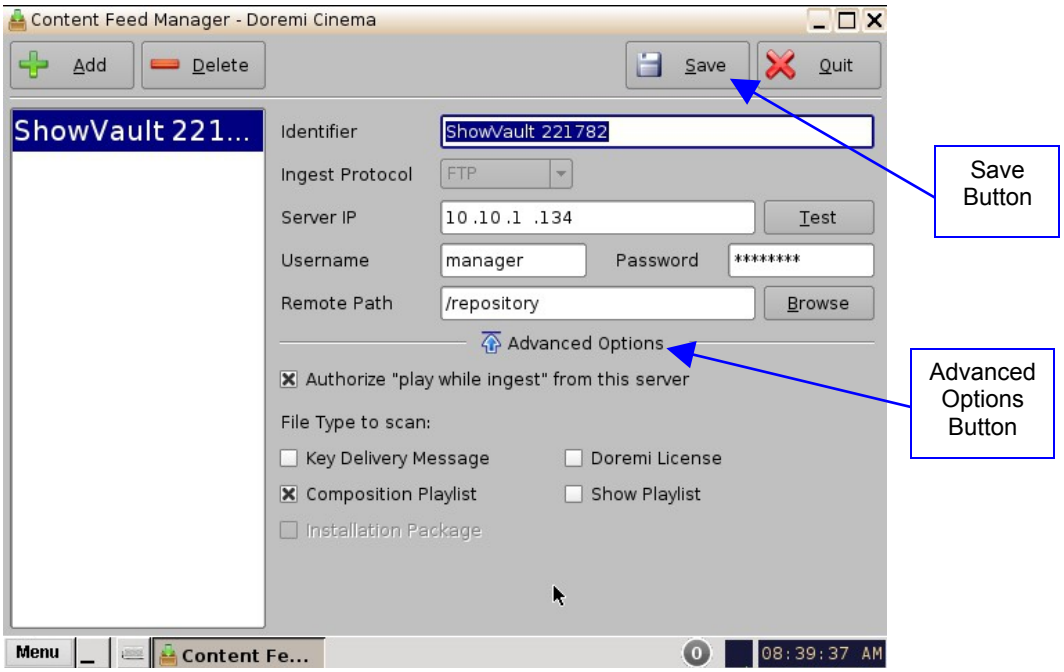


Figure 45: Advanced Options Menu

Clicking the Advanced Options button will open a drop-down menu where the user can configure the following file types to be used for ingesting (Figure 45):

- Authorize "play while ingest" from this server (enabled by default)
- Key Delivery Message – allows the KDM to be ingested from the FTP or another server registered in the netmap.
- Composition Playlist (enabled by default) – allows import or FTP of a CPL into the server.
- Installation Package software, security manager, firmware packages for upgrades.
- Doremi License (DLM) – Doremi License Messages, e.g., Dolby3D, RealD, 4K Enabled, etc.
- Show Playlist – click this box to be able to export and then import a SPL from one server to another.
- Click the Save button to save the configuration. Click the Quit button when finished.

7.3.4 Adding a Server Manually

7.3.4.1 Networking the Server(s)

- The Content Feed Manager GUI can be manually set up by clicking the Add button. This will allow the user to add a new server for which the fields will have to be manually entered.

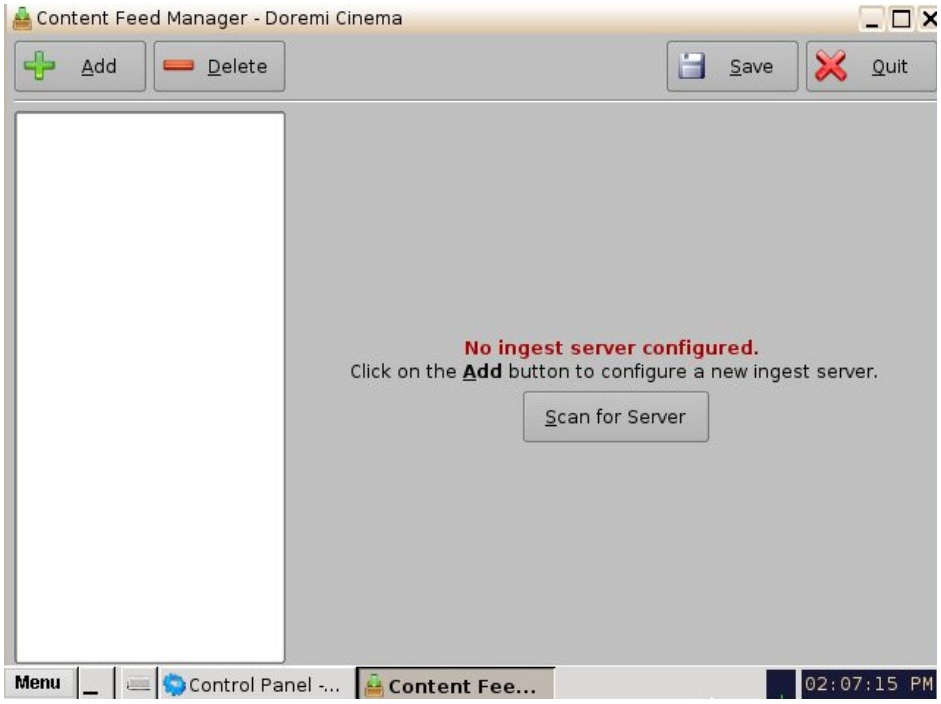


Figure 46: Content Feed Manager GUI

- Click the Add button to add a new server. The following window will appear:

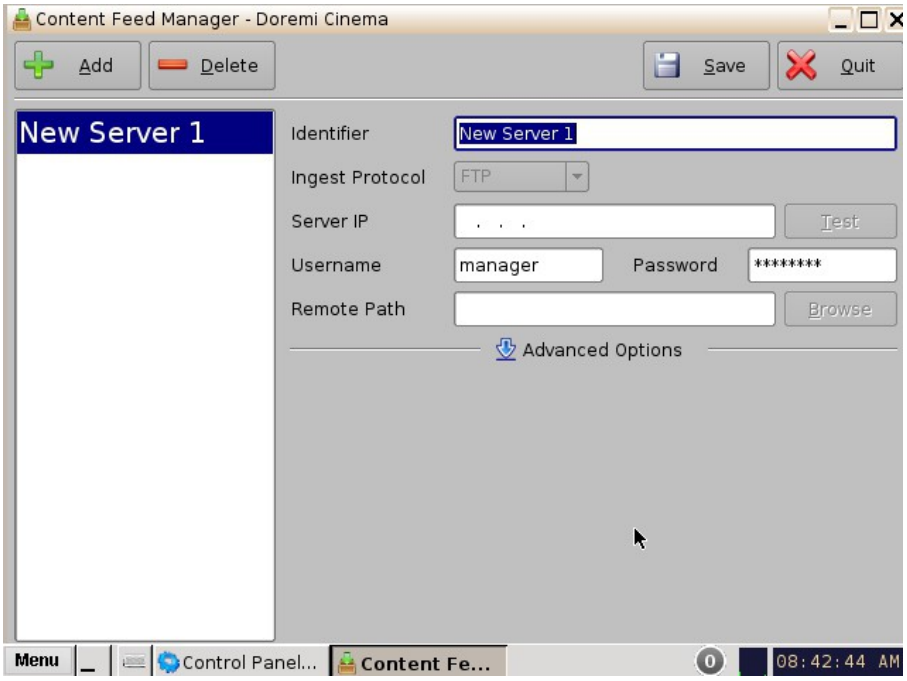


Figure 47: Add New Server

- Enter the Identifier name in the Identifier field. It is recommended that a unique identifier be used (e.g., screen 1, screen 2, etc).
- Enter the IP address for the server.

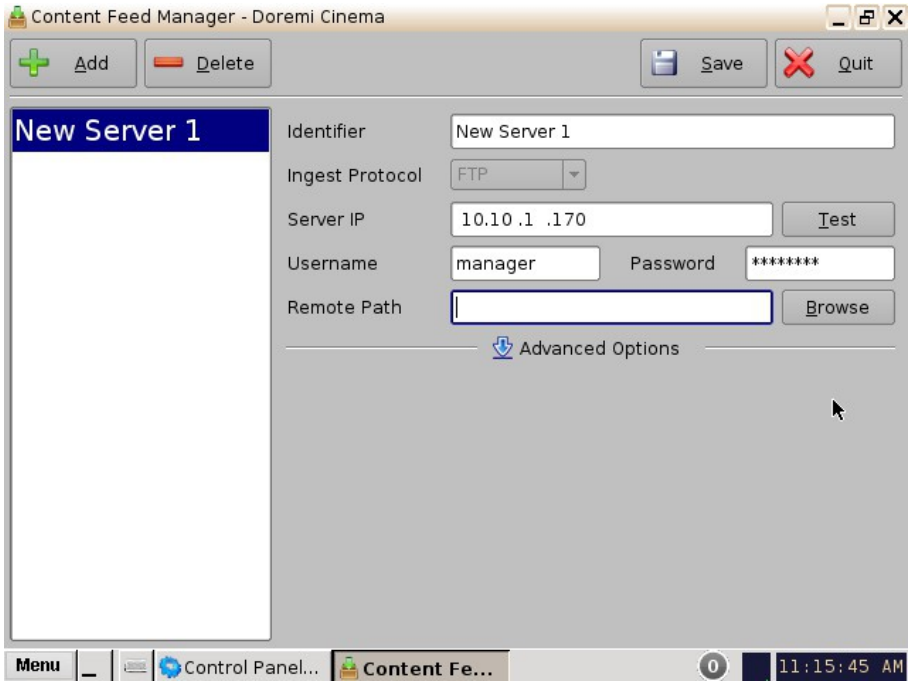


Figure 48: Add a New Server

- Optional: Click the Test button to test the IP connection. A pop-up window will appear that will test the connection (Figure 49). Click the Close button to exist this window.

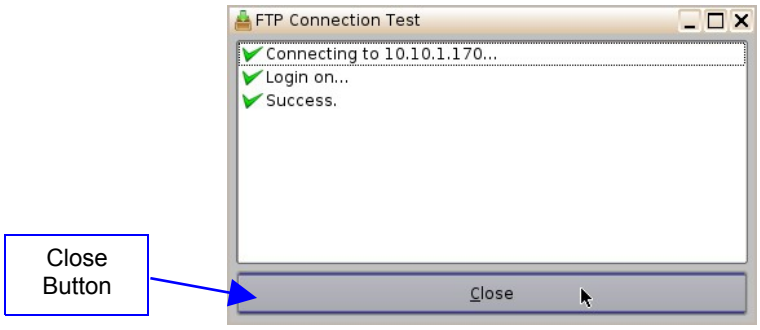


Figure 49: FTP Connection Test Window

- Enter the Remote Path for the destination of the server. Clicking the Browse button will allow the user to locate the Remote Path. The Browse for Folder window will appear.

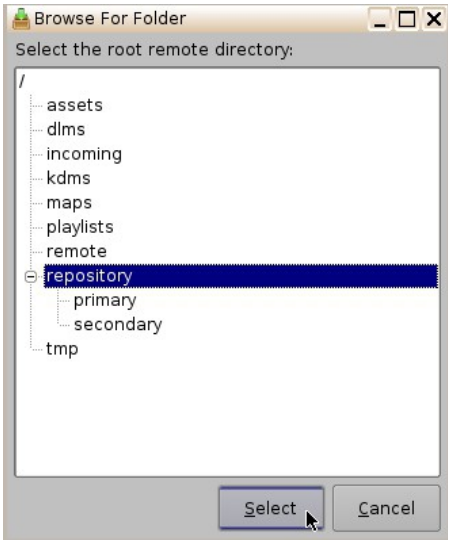


Figure 50: Browse for Folder Window

- Select the folder which contains the content to be ingested.

7.3.5 Advanced Options

Clicking the Advanced Options button will open a drop-down menu where the user can configure the following file types to be used for ingesting:

- Authorize "play while ingest" from this server (enabled by default)
- Key Delivery Message – allows the KDM to be ingested from the FTP or another server registered in the netmap.
- Composition Playlist (enabled by default) – allows import or FTP of a CPL into the server.
- Installation Package software, security manager, firmware packages for upgrades.
- Doremi License (DLM) – Doremi License Messages, e.g., Dolby3D, RealD, 4K Enabled, etc.
- Show Playlist – click this box to be able to export and then import a SPL from one server to another.
- Click the Save button to save the configuration. Click the Quit button when finished. The server is now added to the Content Feed Manager network.

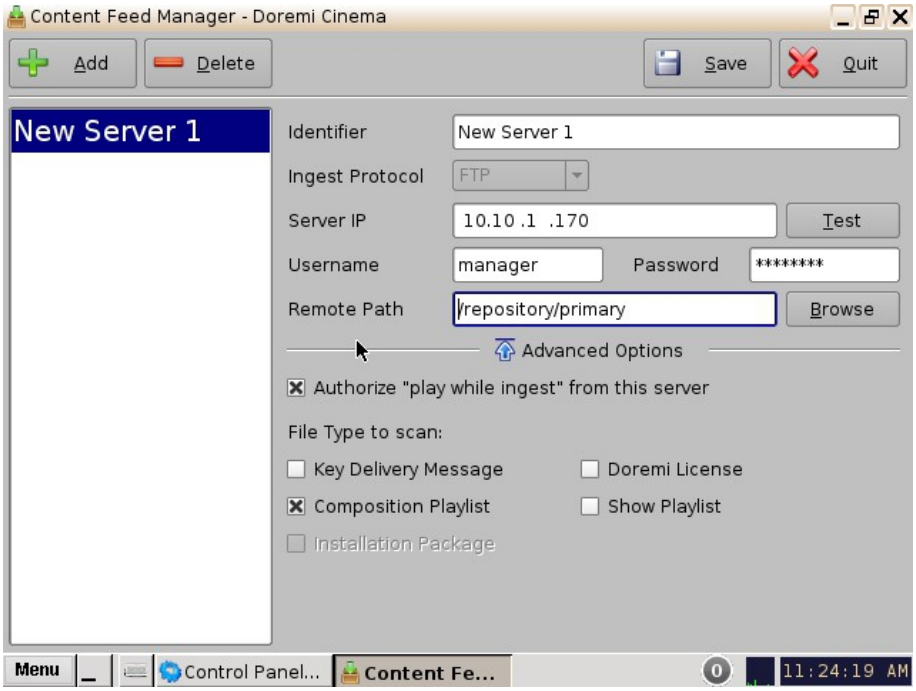


Figure 51: Server Added – Example

7.3.6 Deleting a Server

- Delete a server from the Content Feed Manager list by selecting it and clicking on the Delete button. This will also remove it from the Ingest Manager drop-down list of servers to ingest from. See Figure 51 for the Delete button.

7.3.7 Ingesting from a Server that was Added

- In order to ingest material (restrictions are based on the Advanced Options settings) on the destination unit, the user will need to open the Ingest Manager application (Menu→ Doremi Apps.→ Ingest Manager). Select the unit that was just added, as a source/feed, in the Content Feed Manager application.
- This will populate the Ingest Manager application scan tab window with all the content available for ingest from the selected source/feed unit.
- Select the desired material to ingest.

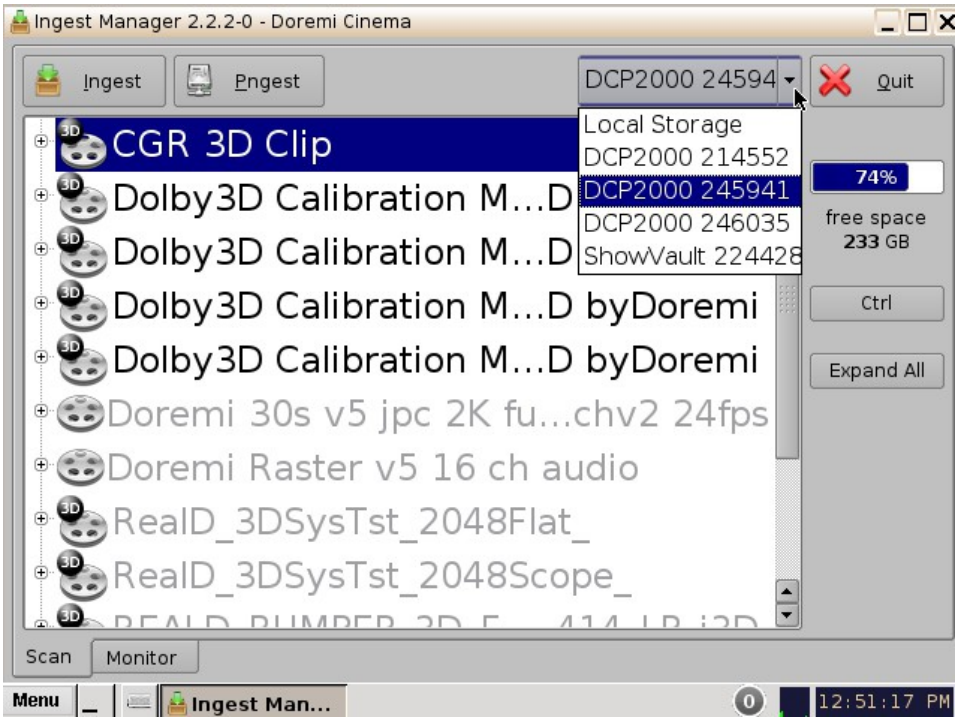


Figure 52: Ingest Manager with Material Ready to Ingest

7.4 Content Manager

- The Content Manager application is a new graphical user interface (GUI), that allows the user to browse, manage and export all the content available on the player including: ShowPlaylist, CPL, KDM and Doremi License. The user has an application to access content information that was not available previously. The Content Manager application is available in the Control Panel.

- To open the Content Manager application, go to Menu → Control Panel and double-click on the Content Manager icon (Figure 53).

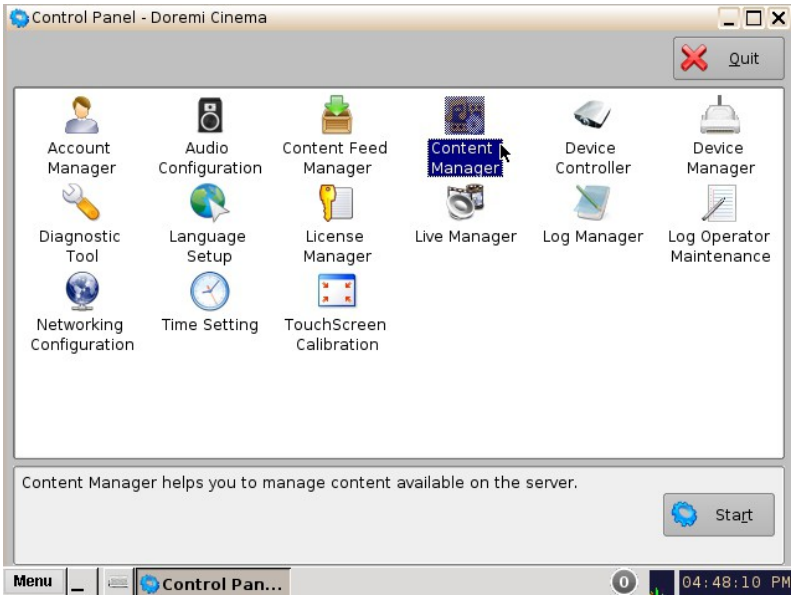


Figure 53: Control Panel with Content Manager Icon Selected

- The following window will appear (Figure 54):

7.4.1 *Home Page*

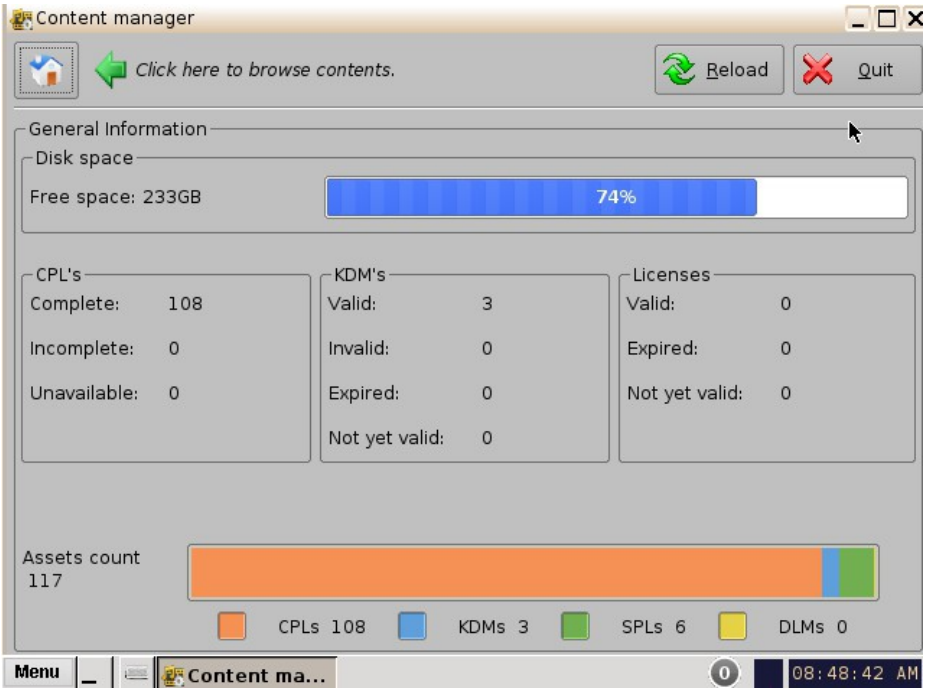


Figure 54: Content Manager Main Tab

- A complete CPL is a CPL that is playable.
- An incomplete CPL misses elements, therefore is not playable.
- An unavailable CPL might be listed by an SPL, but it might have been deleted from the unit.
- Valid KDMs are KDMs that have not expired yet and are for trusted devices.
- Invalid KDMs are KDMs that are either expired or for the wrong trusted device.
- Expired KDMs are KDMs with a validity date that has expired.
- Not yet valid KDMs are for KDMs made in advance, not valid in present, to be used in the future.
- A valid License is a license that has not expired.
- An expired License is a license with validity date that has expired.
- Not yet valid are licenses available on the unit, not valid in present, but valid only for future use.

- The main page (Home Page) will display how much space is available on the unit.
- Click on the House icon indicated by a green arrow pointing to the Home Page button to access more pages.
- These pages will show the user all details for the Composition Playlists, Decryption Keys, Show Playlists, Licenses and other related fields that are on the unit (Figure 55).

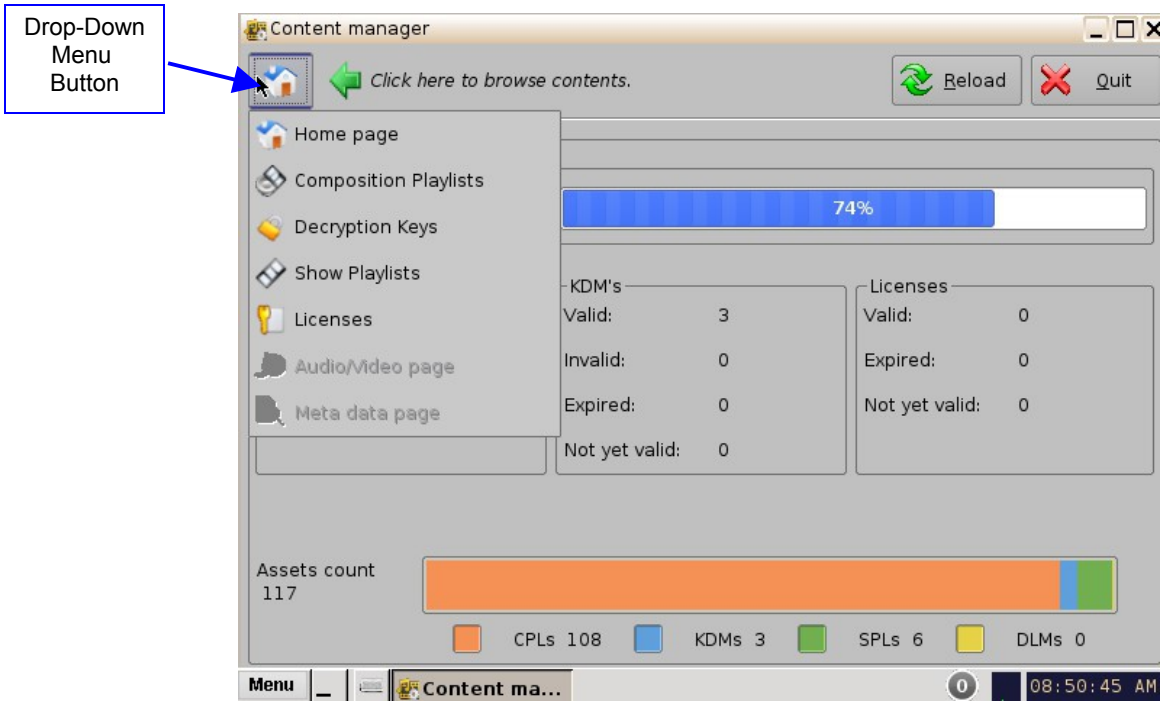


Figure 55: Content Manager Home Page Tab

7.4.2 Composition Playlists Page

7.4.2.1 Actions Button

- Click on the House icon and select Composition Playlists from the drop-down menu.
- The following page will appear showing all the CPLs that are available on the unit.

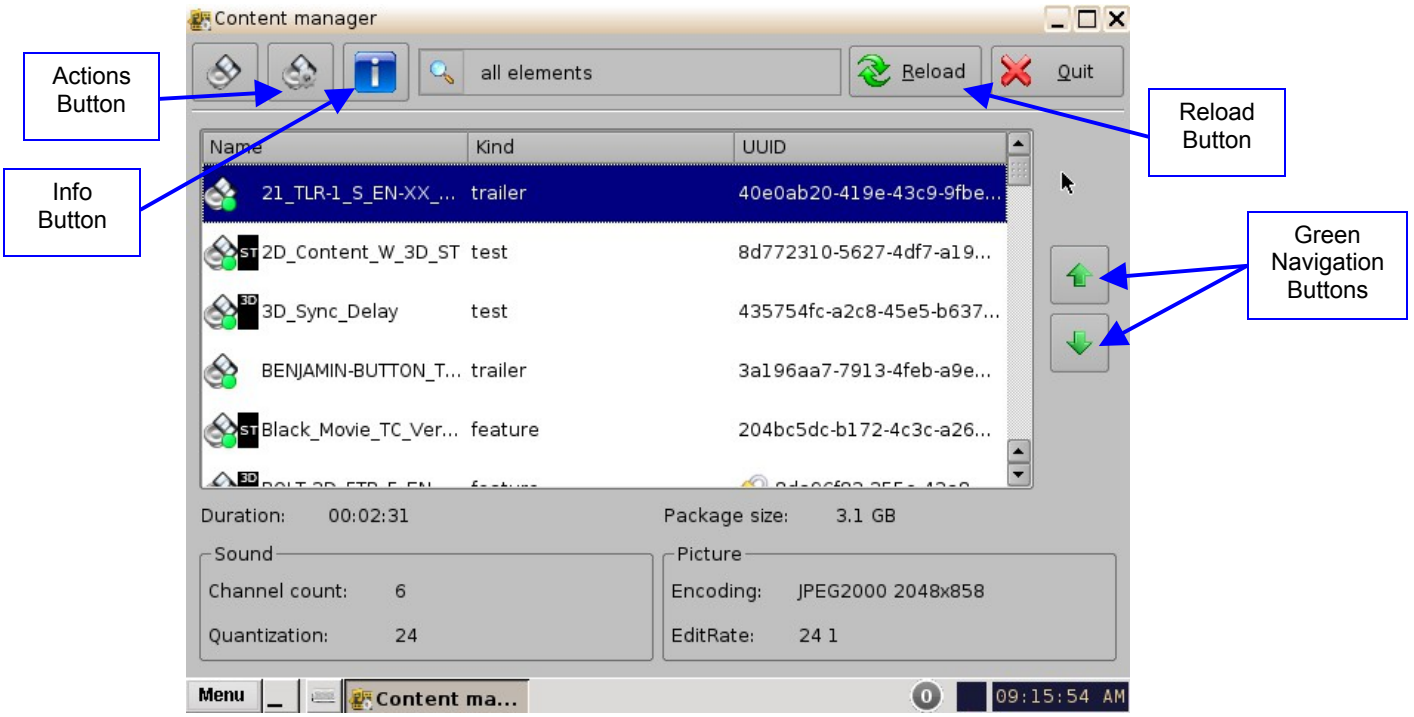


Figure 56: Content Manager Composition Playlists Tab

- The green arrows to the right of the window allow the user to navigate up and down when searching for a CPL (Figure 56).
- The Reload button allows the user to refresh the list of CPLs (Figure 56).
- Select a CPL and click on the Actions button to get more options (Figure 56).
- The Actions button will allow the user to (Figure 57):
  - Delete a CPL
  - Perform an Integrity Check
  - Perform a Sanity check
  - Export a CPL

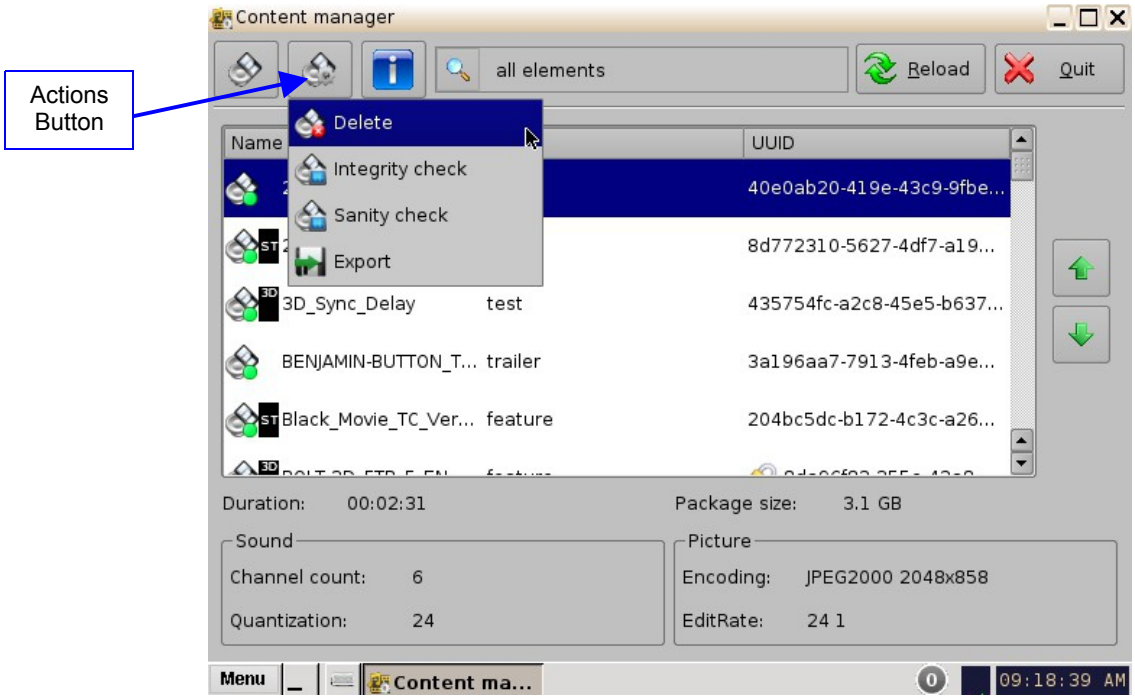


Figure 57: Content Manager Composition Playlists Tab

Delete: This action will delete a CPL entirely from the system.

- To delete a CPL, scroll to the desired CPL, select it and then click the Actions button and select Delete.
- A Manager authentication password will be required to delete the CPL.
- A Delete Composition Playlist confirmation window will appear. Click Delete to confirm the deletion or press Cancel to abort the operation (Figure 58).
- Check the Delete all KDM check-box to delete the KDMs for the selected CPL.

Figure 58: Delete Composition Playlist Window

Integrity Check: This function will verify the hash/checksum (SHA-256) of the selected CPL. It verifies all MXF files that were properly ingested and that no corruption occurred during the ingest process.

- To perform an Integrity Check, select the desired CPL and select Integrity check from the Actions drop-down menu.
- The following window will appear, which will run a test on each file of the CPL

  (Figure 59).
- The results of the integrity check of each file are shown in the Result column.
- Results include:
  - Green check-mark indicates the Checksum is Ok.
  - The word "Missing" in red indicates that the file is not present according to the asset map of the CPL.
  - The word "Failed" means that the file is corrupted.
  - Progress check percentage means the operation is in progress.

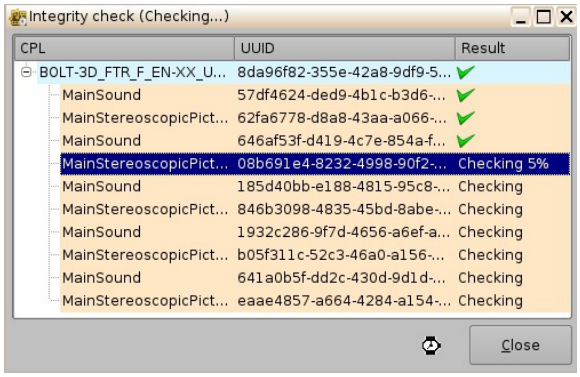


Figure 59: Integrity Check Window

Note: The test might run for an extended period of time (e.g., 45 minutes, depending on the CPL size). Choose this test only if doubts persist about the integrity of the CPL.

- Click the Close button when the Integrity Check is completed.

Sanity Check: This function will check the sanity of the selected CPL.

- To perform a Sanity Check, select the desired CPL and click Actions button and select Sanity Check item.
- The following window will appear, which will automatically run a test on each of the following security aspects of the CPL.
    - Checking signature
    - Checking KDM is valid
    - Checking asset's existence
    - Checking timings coherency
    - Checking index files
    - Checking duration coherency
    - Checking video coherency
    - Checking audio coherency
    - Checking minimum duration
    - Checking timedtext files

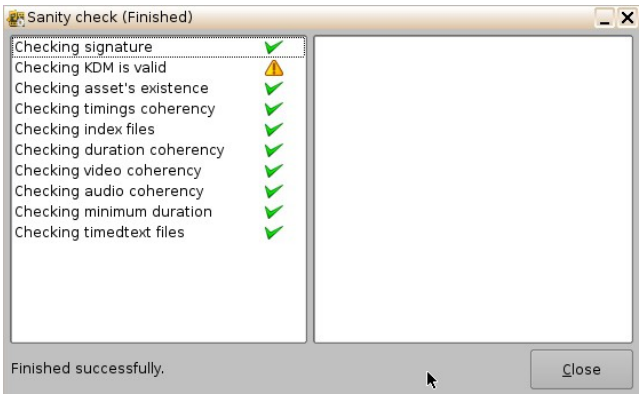


Figure 60: Sanity Check Window

- Once the test is complete, click the Close button (Figure 60).

Export: This function will export the CPL to a desired location (e.g., a USB flash drive).

- To export a CPL, select the desired CPL, and click the Actions button. Select Export.
- The Export CPL window will appear (Figure 61):

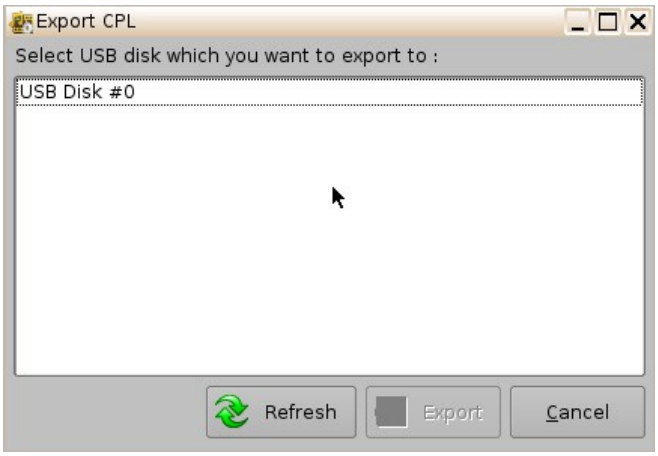


Figure 61: Export CPL Window

- Select the location to export the CPL to (e.g., USB Disk #0) and then click the Export button (Figure 62).

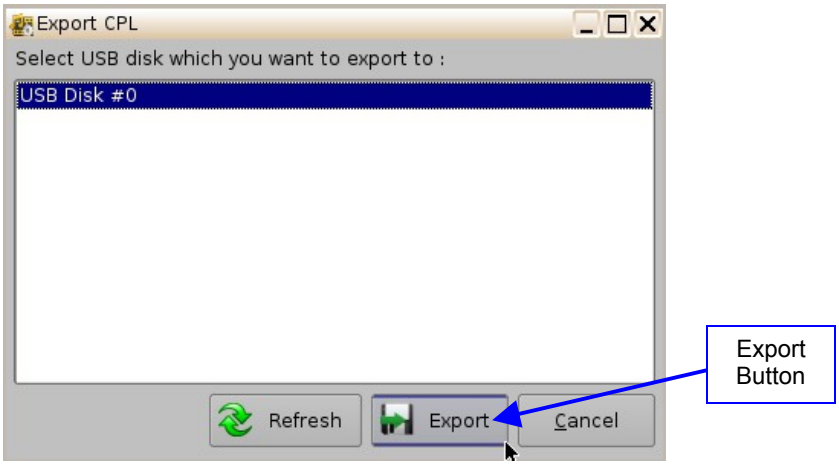


Figure 62: Export CPL Window

- The following window will appear showing the CPL being copied to the USB (Figure 63).

Note: The current software does not support NTFS file system to export to. If the USB is formatted as NTFS, then an error message will appear to indicate that the file was not exported. Currently, the supported file system formats for exporting include: FAT (limit 4GB per file), FAT 32 (limit 4GB per file), ext2, ext3, and HFS.

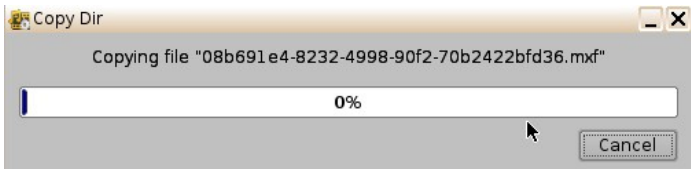


Figure 63: Copy CPL Window

- Once the CPL has been copied to the USB, the following window will appear:

Figure 64: OK Window

- Click the Ok button to complete the export (Figure 64).

7.4.2.2 Info Button

The Info button displays general information about the CPL. The information displayed includes: KDM, Properties, Show Playlists that the CPL is a part of, and Assets. Any time the user wants to exist the CPL Information window, click on the Close button located in the bottom-right.

- To use this function, select a CPL and click the Info button.
- The following window will appear (Figure 65):

7.4.2.2.1 Properties Tab

- The Properties tab displays the following information about the CPL (Figure 65):
  - Title
  - UUID (Universally Unique Identifier)
  - Creation date
  - Package size
  - Duration
  - Edit rate (frame rate)
  - Kind (e.g., trailer, feature, etc.)
  - Creator
  - Issuer
  - Sound: Channel count, Quantization bits, Encoding
  - Picture: Encoding and Dimension

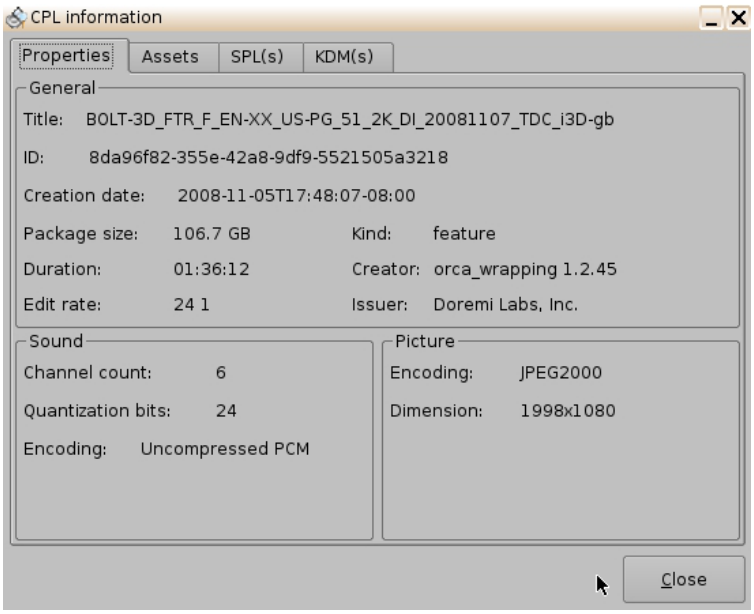


Figure 65: CPL Information Window - Properties Tab

7.4.2.2.2 Assets Tab

- The Assets tab displays information on all the Reels that compose the CPL and the Assets in each Reel (Reel number, subtitle and sound). See Figure 66 below.

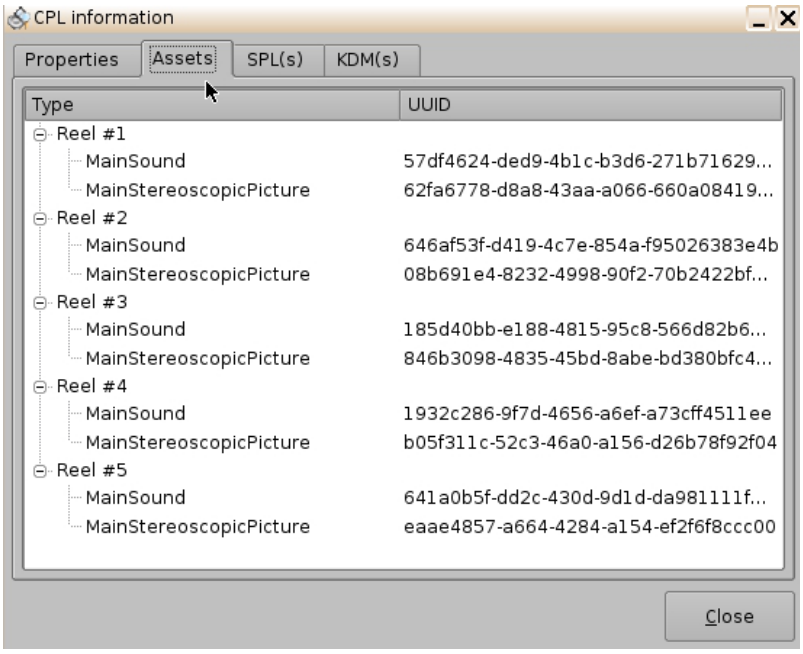


Figure 66: CPL Information Window - Assets Tab

7.4.2.2.3 SPL(s) Tab

- The SPL(s) tab displays information related to all of the Show Playlists that contain the selected CPL.

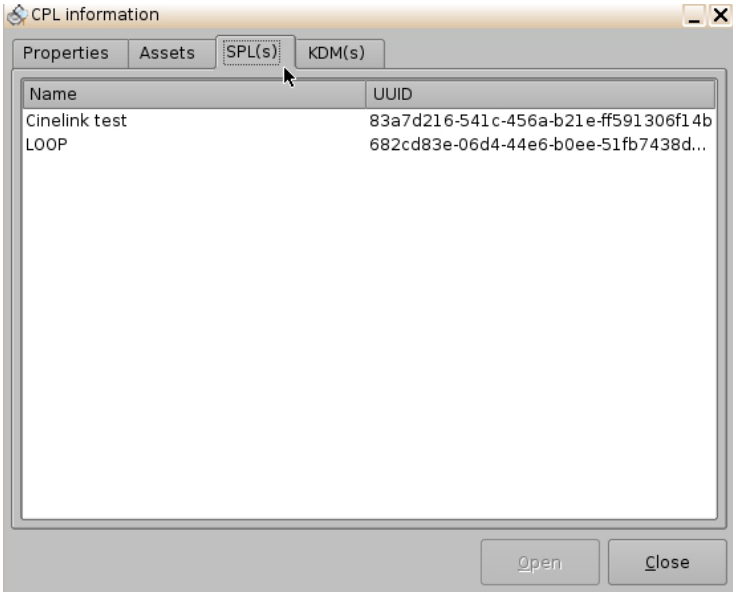


Figure 67: CPL Information Window - SPL(s) Tab

- The SPL information window will appear. Each SPL in this list contains the CPL that information is sought for (Figure 68):
- Select the desired SPL from the Name column and click the Open button. This will open the SPL information window Properties tab that will show all the names of the CPLs inside that SPL.
- The second tab of the SPL information window displays the related schedules

  (Figure 69).

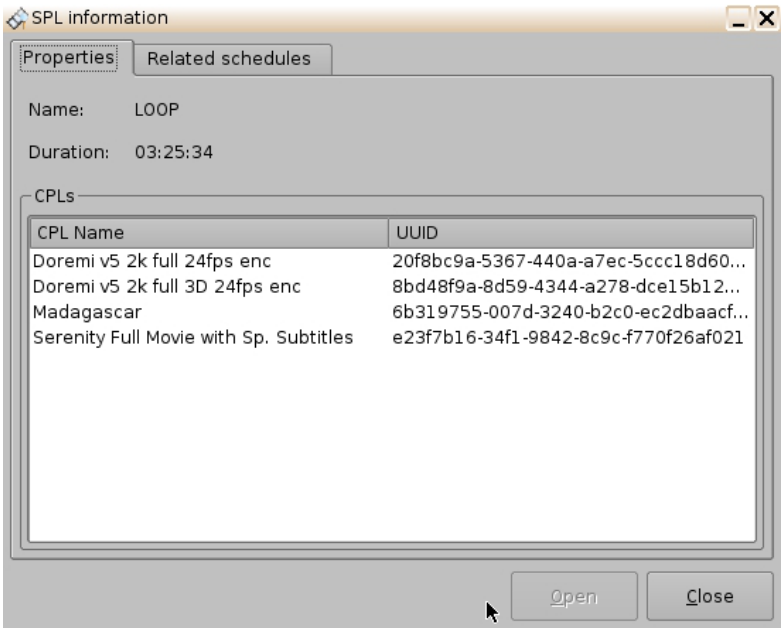


Figure 68: SPL Information Window - Properties Tab

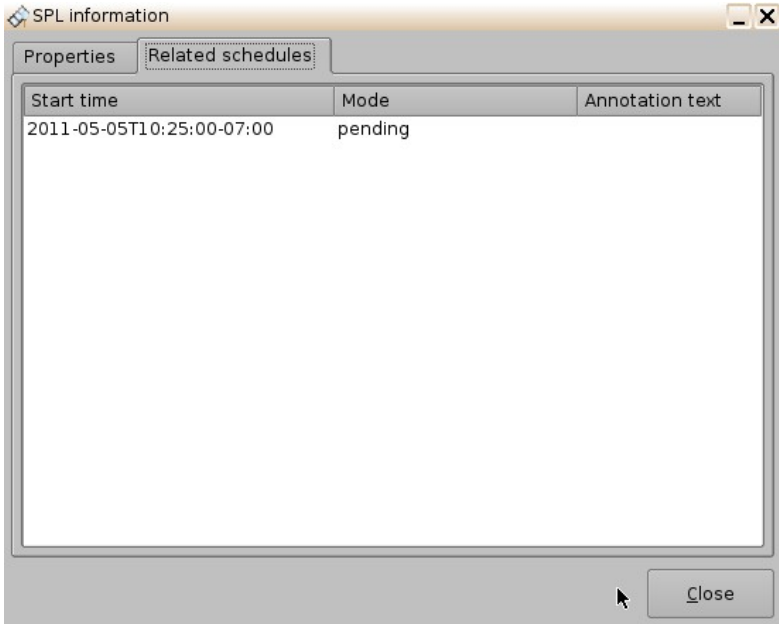


Figure 69: SPL Information Window - Related Schedules Tab

- In this window, the user can select any CPL that is part of the SPL by clicking the Open button. The user will be transferred to the selected CPL Information window (Figure 70).

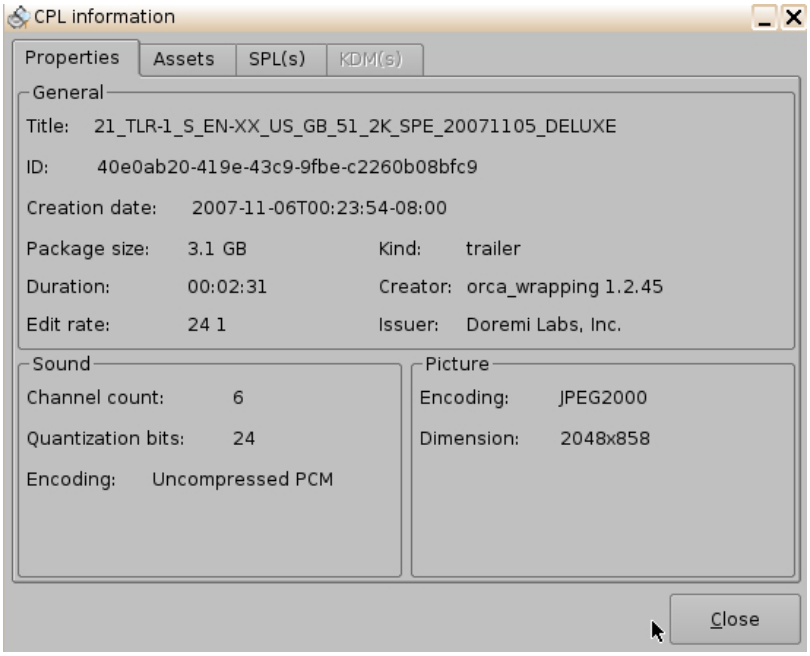


Figure 70: CPL Information Window - Properties Tab

7.4.2.2.4 KDM(s) Tab

- This tab will display the UUID and Validity of each KDM for the concerned CPL (Figure 71. Select a KDM and select Open. This will take the user to the KDM Information window Properties tab (Figure 72).

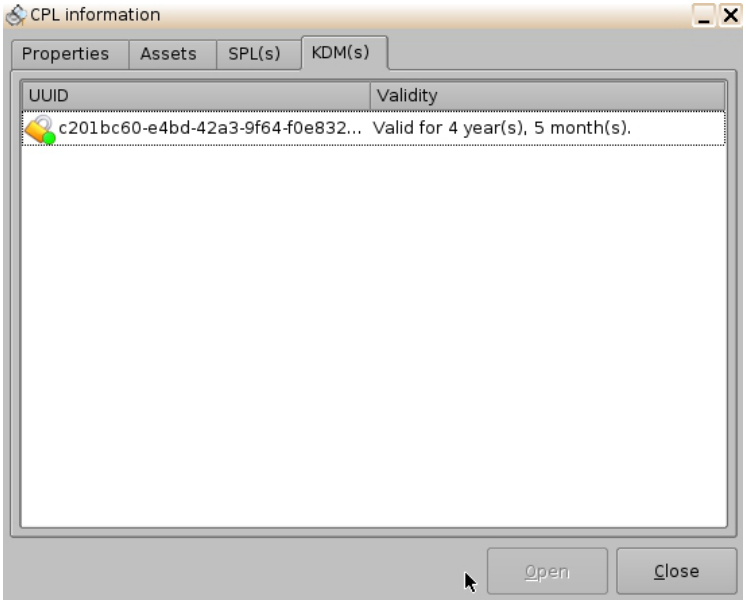


Figure 71: CPL Information Window - KDM(s) Tab

- The Properties tab displays the following information about the selected KDM

(Figure 72):

- Message ID: KDM UUID
- Message Type: MessageType field of the KDM
- Annotation Text: AnnotationText field of the KDM
- Ingestion Date: Date on which the KDM was ingested into the server

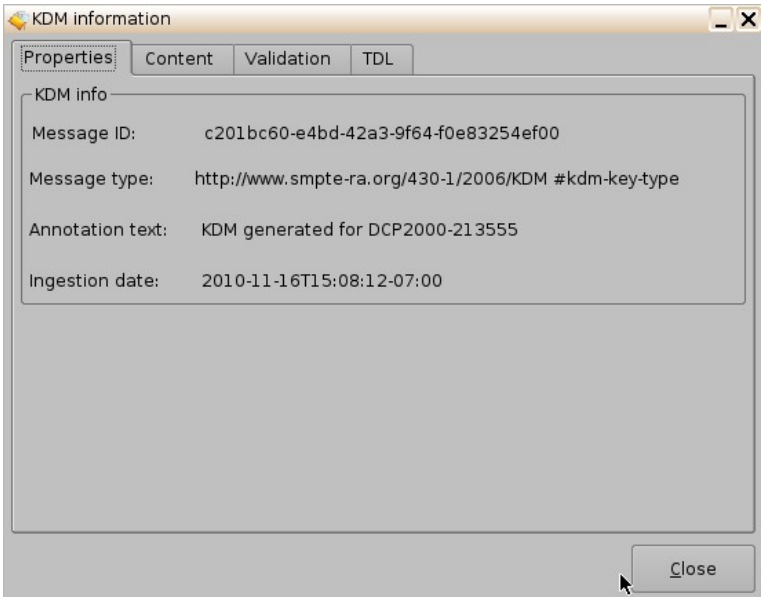


Figure 72: KDM Information – Properties tab

- The Content tab contains the following information about the related CPL (Figure 73):
  - CPL Title:
  - CPL ID (CPL UUID):
  - Audio Forensic Info (enabled / disabled):
  - Video Forensic Info (enabled / disabled):

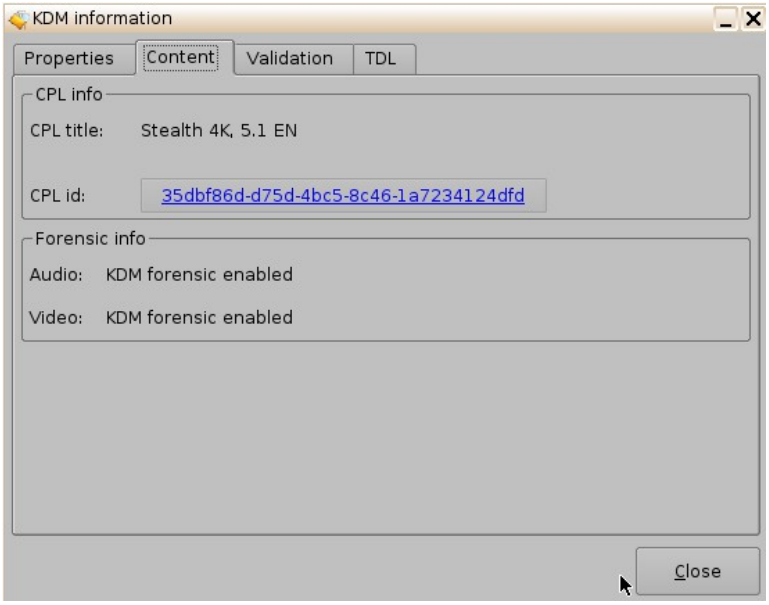


Figure 73: KDM Information – Content Tab

- The Validation tab contains precise information about the date and time of the validity of the KDM, an approximation of the period for which the KDM is valid as well as Signer information (subject and issuer). See Figure 74 below.

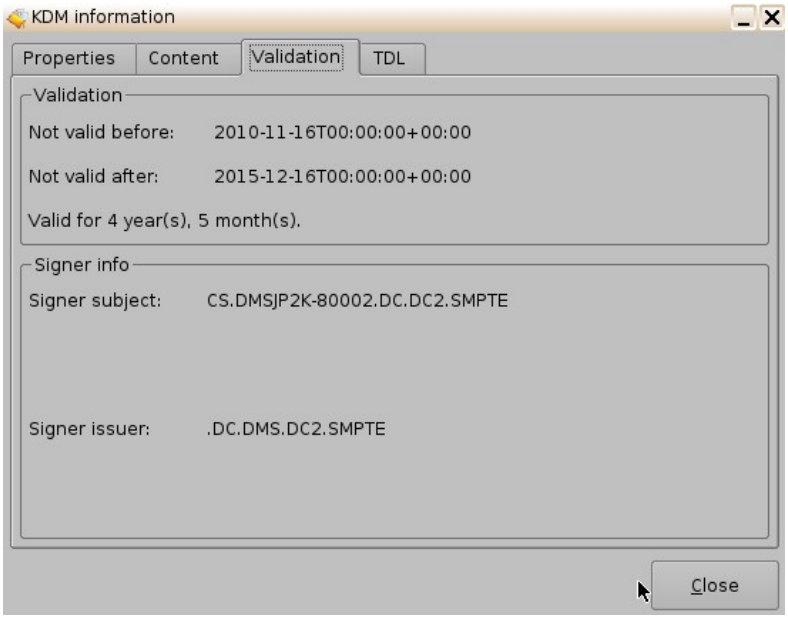


Figure 74: KDM Information Pop-Up Window

- The TDL tab contains the list about the trusted devices (projectors) and their certificate thumbprints (Figure 75).

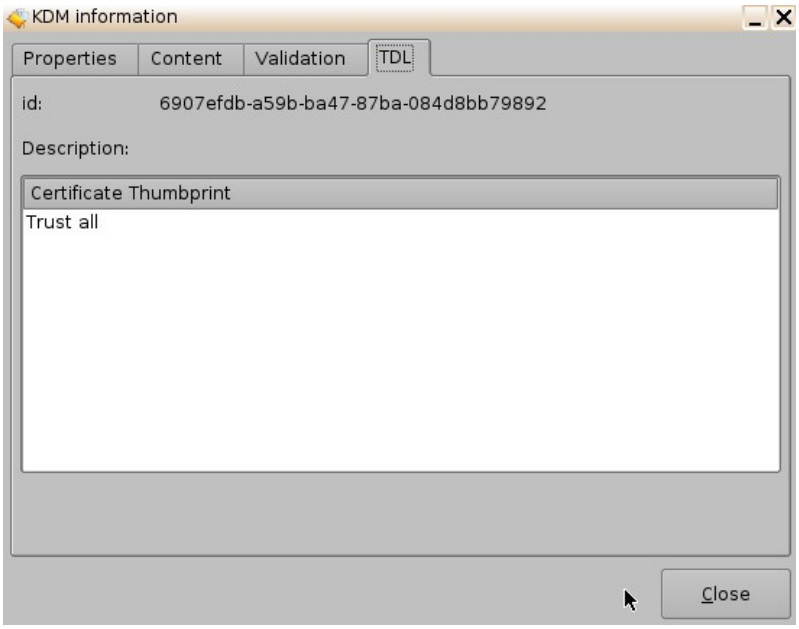


Figure 75: KDM Information Pop-Up Window

7.4.3 Search Tool

The Content Manager allows the user to search for CPLs, in the Composition Playlist tab, using the search field located on the top portion of the window (Figure 76). The Search Tool allows the user to sort the CPLs based on the following elements (or perform a Custom Search, which is not case-sensitive, by entering a search pattern):

- All Elements, Incomplete Elements, Feature, Rating, Teaser, Test, Trailer, Transitional, or Custom Search.

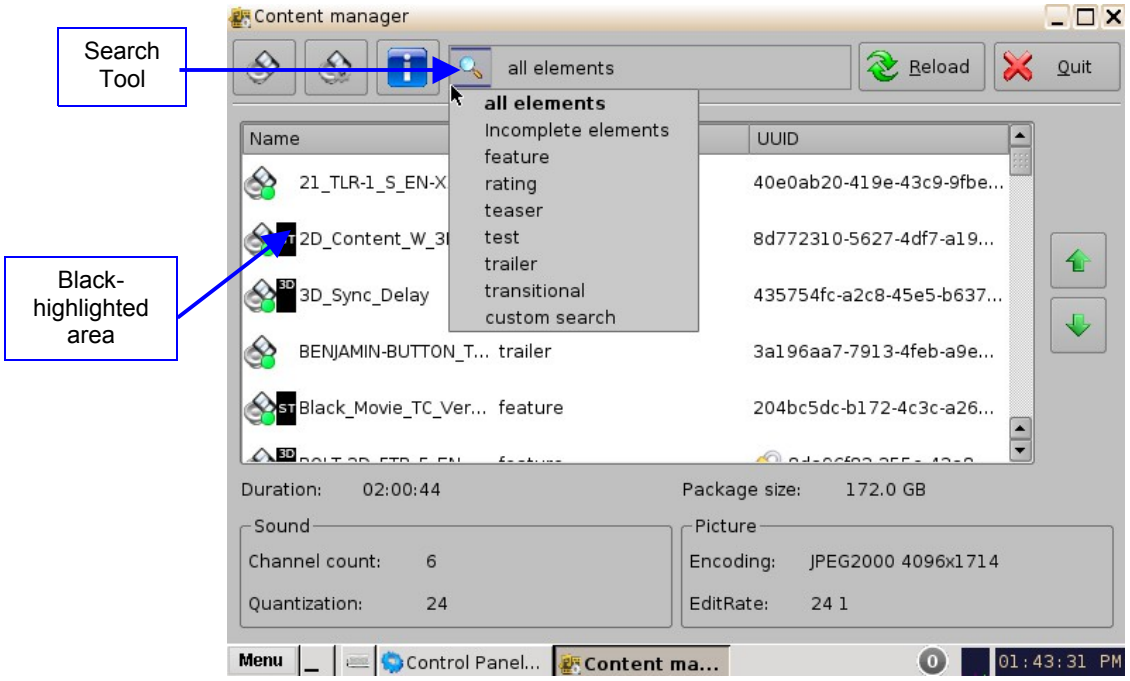


Figure 76: Search Tool

- For example, select Trailer to sort the CPLs. The CPLs will be alphabetically ordered within the Trailer category (Figure 77).

Note: The black-highlighted area (Figure 76) indicates whether the content is 3D or has subtitles (ST).

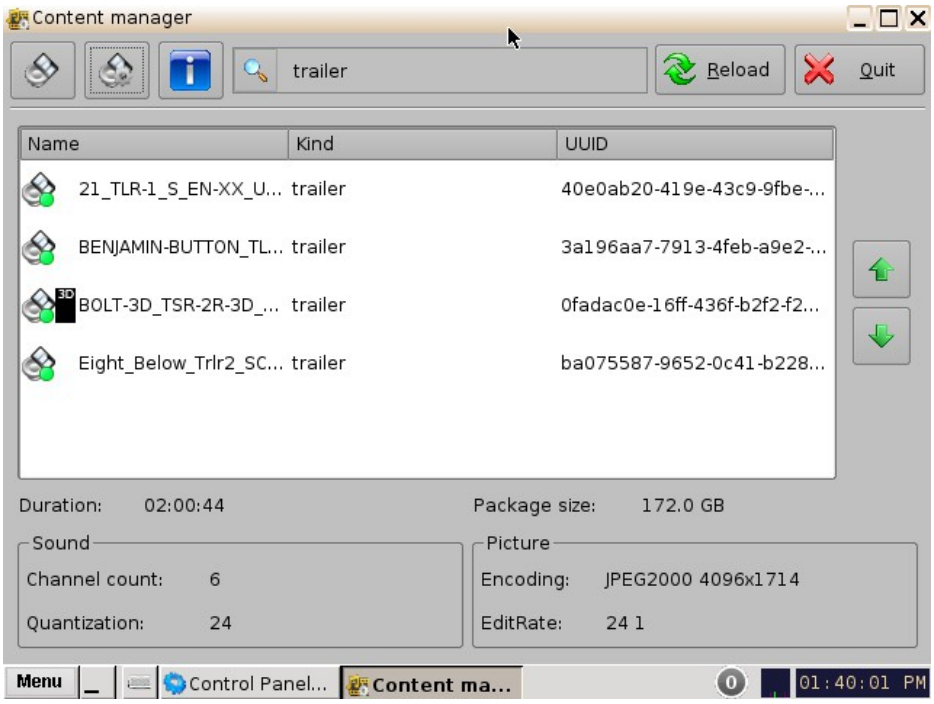


Figure 77: Search Field

7.4.4 Decryption Keys Page

- The Decryption Keys page displays the list of all encrypted CPLs on the unit and the corresponding KDMs with a description of the following information (Figure 78):
  - Expiration date
  - Electronic Serial Number of the unit
  - UUID of the KDM
- The user can perform a Sanity Check of the KDM as well as delete the selected KDM.
- Click on the Home Page tab and scroll down and select Decryption Keys.
- The following window will appear:

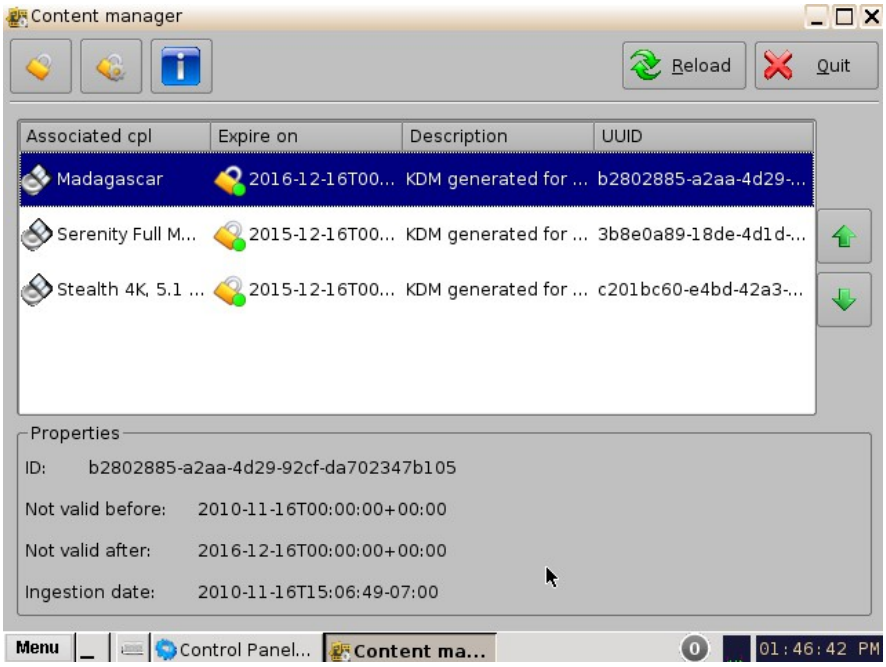


Figure 78: Decryption Keys Tab

7.4.5 Performing a KDM Sanity Check

- Select a KDM from the KDM list and click the Actions button and select the Sanity Check menu item.
- The Sanity Check window will appear displaying the results of the Sanity Check

  (Figure 79).

- The results of the Sanity Check are displayed in the bottom-left corner of the Sanity Check window (Figure 79).

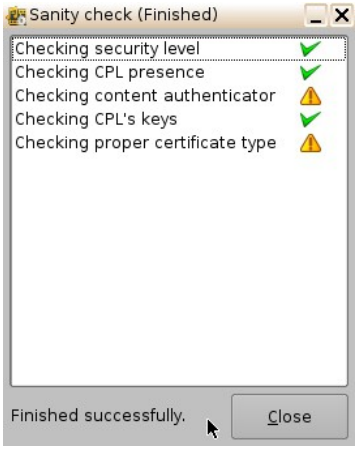


Figure 79: Decryption Keys Tab

- Once the Sanity Check is completed, click the Close button (Figure 79).
- To view the properties of any KDM, select it from the list and the information will be displayed in the bottom half of the window (Figure 80).

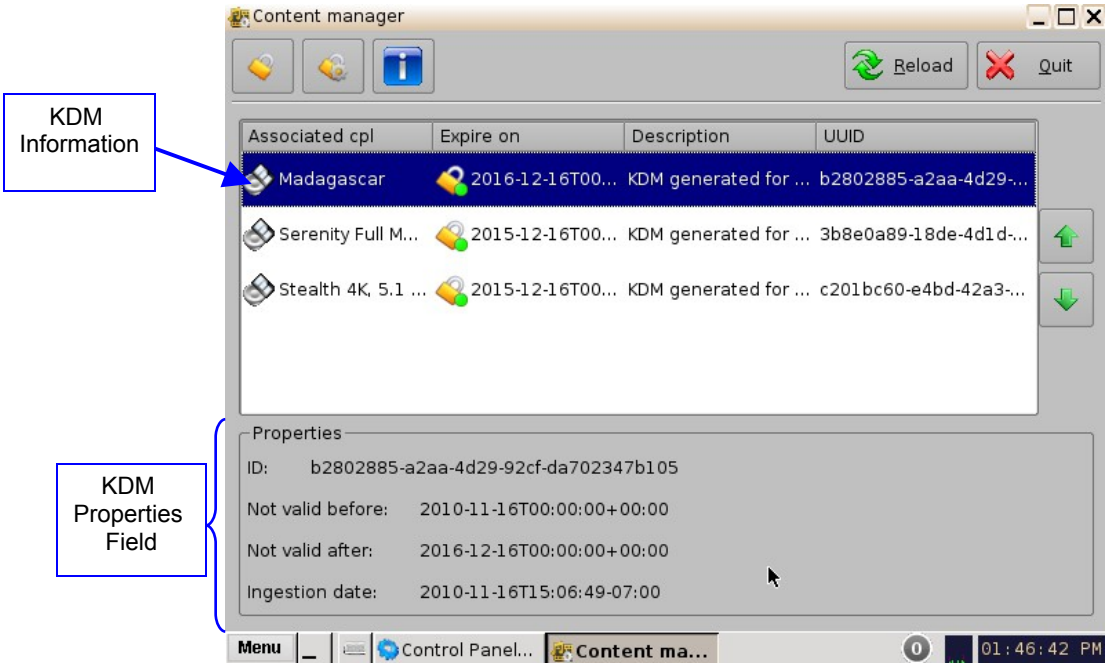


Figure 80: Decryption Keys Page: KDM Selected - Properties Shown

- This same information can be obtained by selecting the KDM line and clicking the Information button.

7.4.6 Show Playlists Page

- This page displays all the SPLs available on the unit together with the following information:
  - SPL Duration
  - SPL UUID

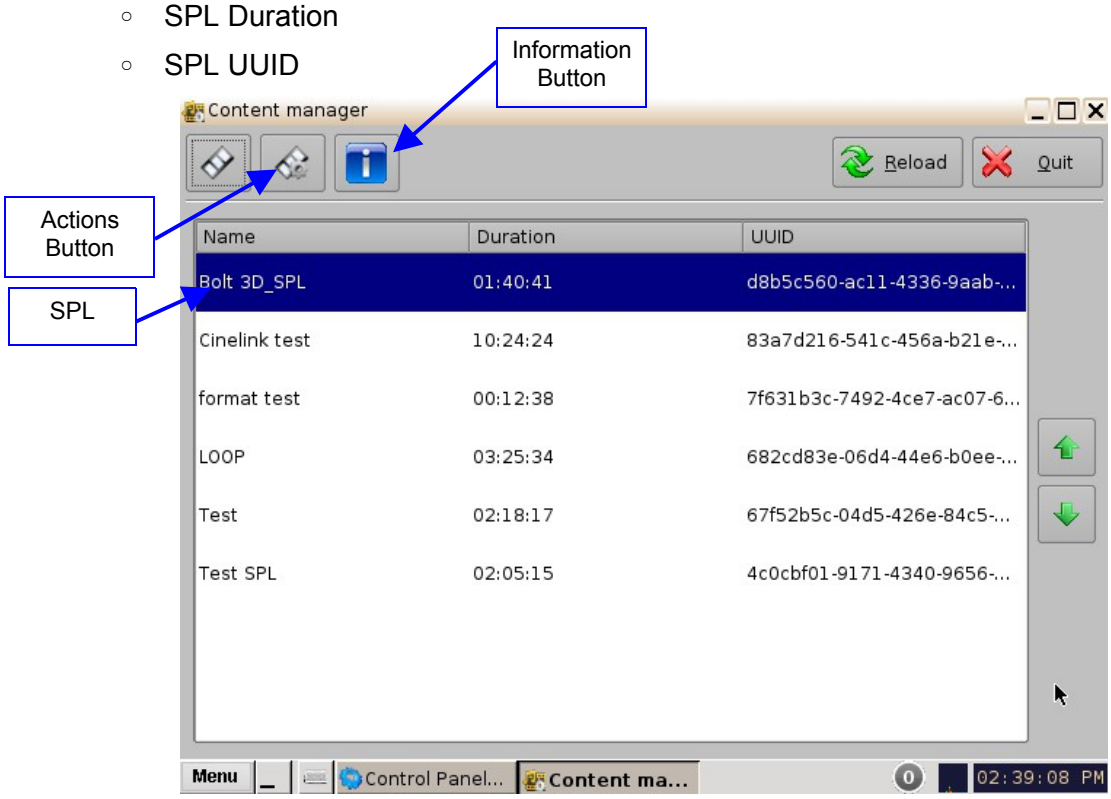


Figure 81: Show Playlists Page

- The following Actions can be performed from the Show Playlists page: Delete and Export SPLs.

7.4.6.1 Delete an SPL

- Select an SPL from the list and click the Actions button (Figure 81) and select Delete from the drop-down menu.
- A manager password and confirmation will be needed to perform the operation.
- Confirm or deny the deletion with the pop-up confirmation window by pressing Yes or No.

7.4.6.2 Export an SPL

- Insert a USB device in a USB port on the unit.
- Select an SPL from the list and click the Actions button (Figure 81) and select Export from the drop-down menu.
- Select the USB device to export the SPL to.
- Click on the Export button.
- When the Export is finished, click on the Ok button and remove the USB device.

Note: The current software does not support NTFS file system to export to. If the USB is formatted as NTFS, then an error message will appear to indicate that the file was not exported. Currently, the supported file system formats for exporting include: FAT (limit 4GB per file), FAT 32 (limit 4GB per file), ext2, ext3, and HFS.

7.4.7 Information Button

- Select an SPL and click the Information button to get details regarding the SPL.
- The SPL Information window pops up and displays SPL Properties tab (all CPLs in it) and the Related Schedules tab.

7.4.8 Licenses Page

- To get to the Licenses page click on the Home icon and select the Licenses menu item. The Licenses page will appear (Figure 82).

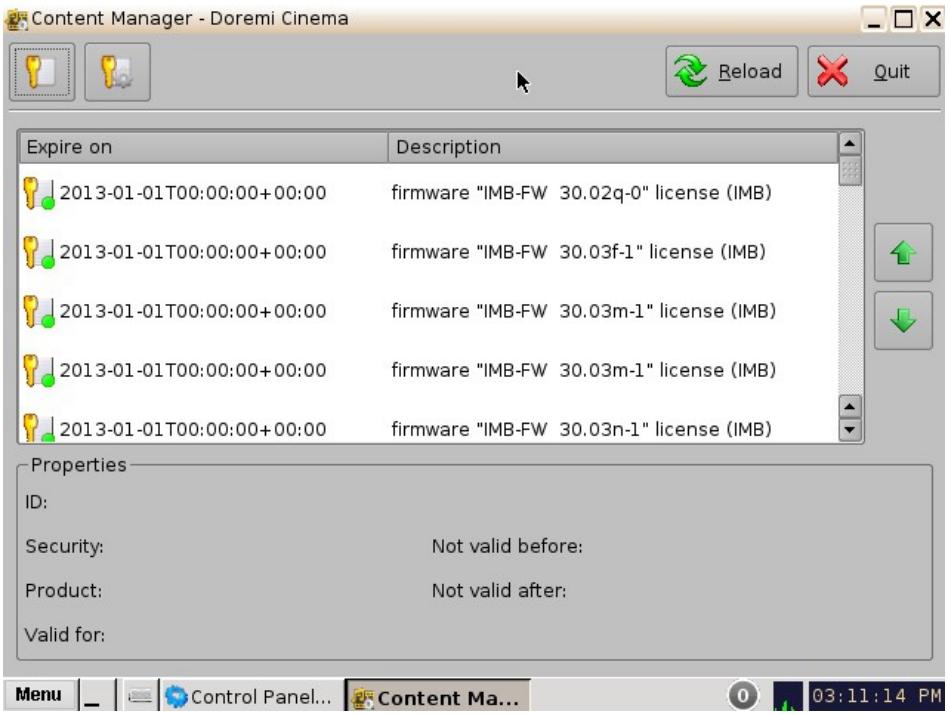


Figure 82: Licenses Page

- The Licenses page contains the list of all the licenses available on the unit including the expiration date and short description of the usage of the license. On this page, the user is allowed to delete licenses.

7.4.9 Delete a License

- Select the license from the list and then click on the Actions button (Figure 83).
- Click on Delete.

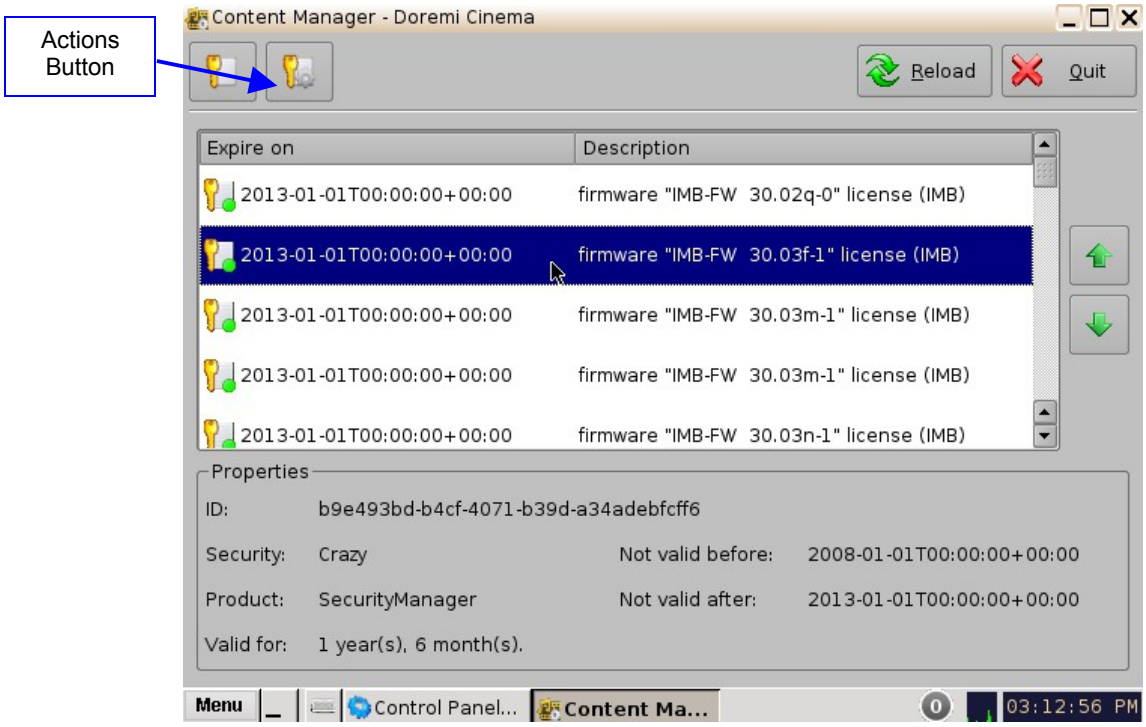


Figure 83: Licenses Page

- A Manager password will be needed to perform the deletion (Figure 84).

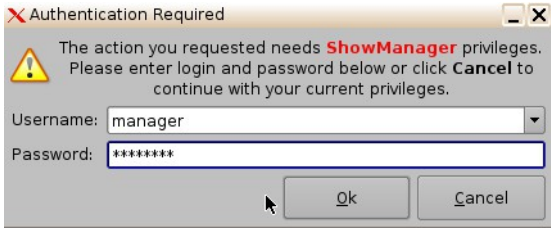

Authentication Required
The action you requested needs ShowManager privileges.
Please enter login and password below or click Cancel to continue with your current privileges.
Username: manager
Password: ********
Ok
Cancel

Figure 84: Password Confirmation Window

- Click on Yes to confirm the deletion (Figure 85).

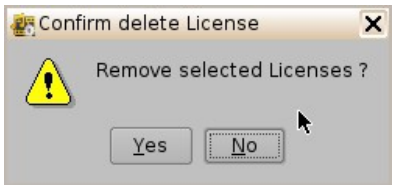


Figure 85: Confirmation Window

7.5 Device Controller

7.5.1 How to Configure the Device Controller GUI

- To open the Device Controller application, go to Menu -> Control Panel and double-click on the Device Controller icon (Figure 86).

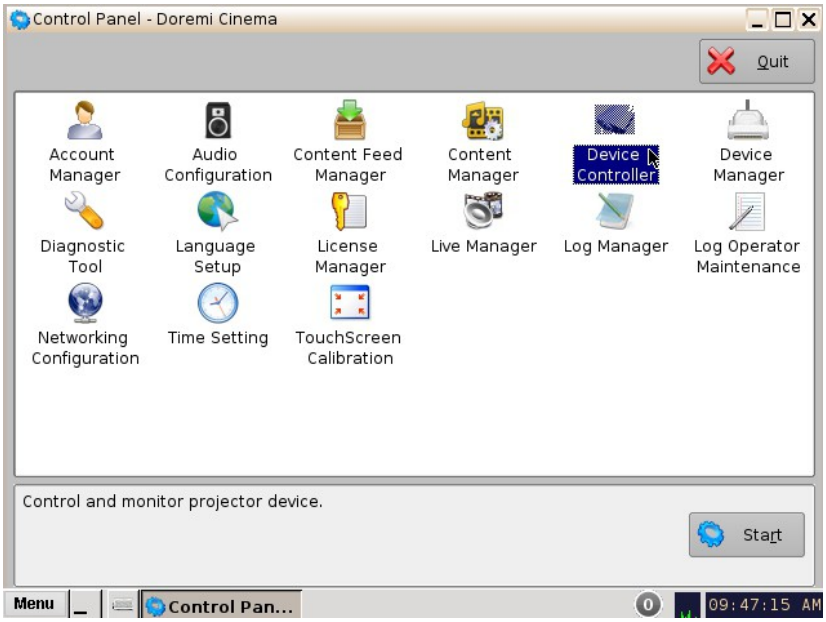


Figure 86: Control Panel with Device Controller Selected

- A manager password will be required for authentication.

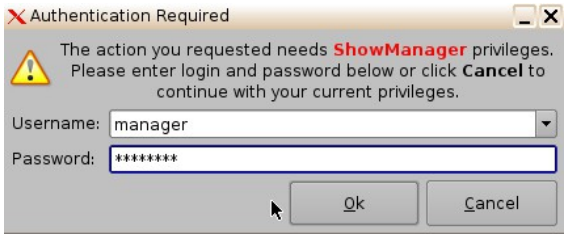

Authentication Required
The action you requested needs ShowManager privileges.
Please enter login and password below or click Cancel to continue with your current privileges.
Username: manager
Password: ********
Ok
Cancel

Figure 87: Password Confirmation Window

- The following Device Controller window will appear.
- In the example below, "IMB" device will be the controlled device.

7.5.2 Registered Tab

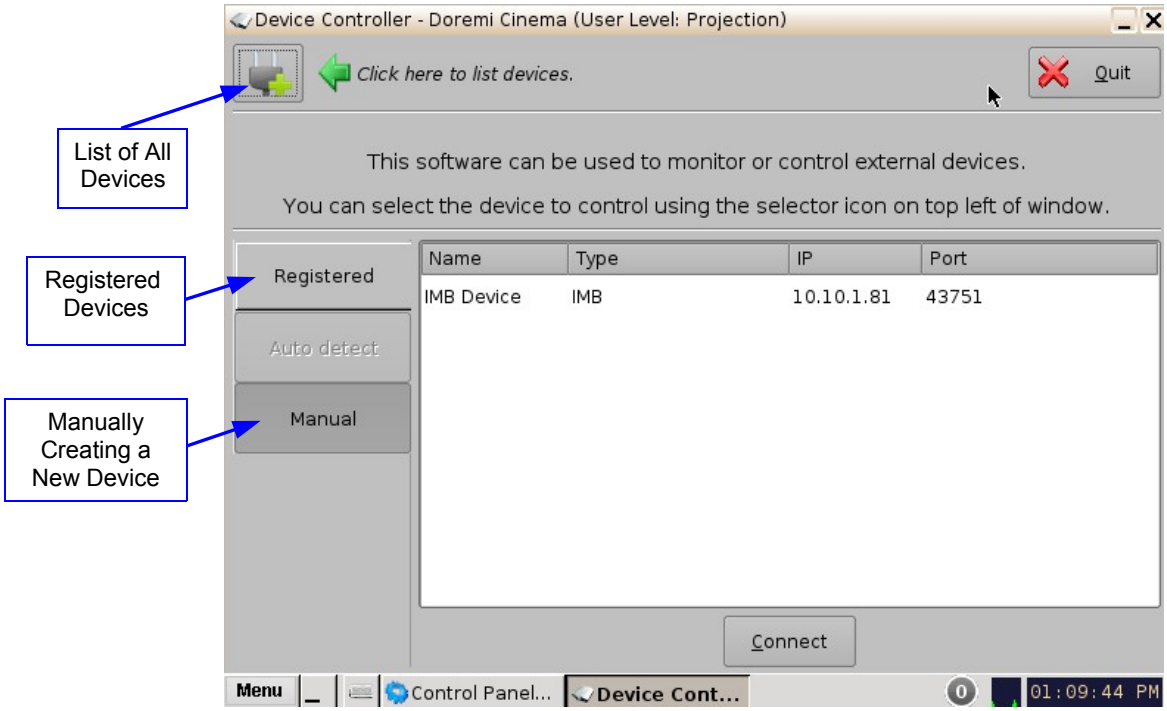


Figure 88: Device Controller GUI - Registered Tab

- If the device was previously created/registered in the Device Manager GUI, then it will automatically appear in the "Registered" tab of the Device Controller GUI.
- An IMB or Sony SRX Projector will be automatically dedicated by the Device Controller application when added to the network.
- Click on the List of all Devices window and select the device to control (Figure 88).
- The following parameters are shown in the Registered tab for the device:
    - Name:
    - Type:
    - IP:
    - Port:
- **In case of the Sony projectors, the IP must always be 127.0.0.1; otherwise, the Sony setup will not function properly.**
- The "Port" number is automatically populated. **Please do not alter this field**.
- Select the device to control and then click the "Connect" button. Or, select the device from the drop-down menu to connect to the device to control. The Device Controller window will display four tabs that will allow the user to configure, control, and manage the device.
- The Status Indicator shows whether the device is: Online "green," stand-by mode in "Yellow," or offline, which is "Red." In this case, it is green.

7.5.3 Input Settings Tab

The first tab displays and controls the input source and scaling.

- Input: The following sources are supported:
  - Internal: signal source is the ShowVault unit.
  - HDMI: signal source is an external device (e.g., BD player) that connects via HDMI cable to the IMB.
  - SDI: signal source is an external device that connects via SDI cables to the IMB.
- Scaling: The following masking/scaling are selectable from the drop-down menu.
  - Side Masking
  - Top/Bottom Masking
  - One-to-One

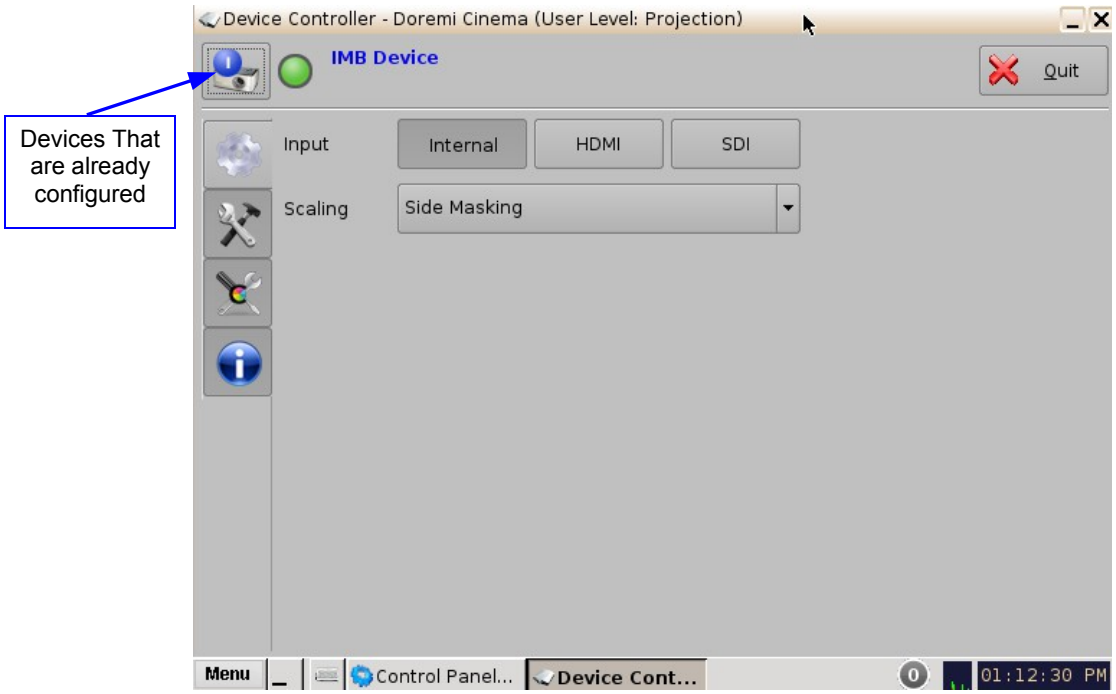


Figure 89: Device Controller GUI

7.5.4 Networking Configuration Tab

The second tab displays the networking configuration.

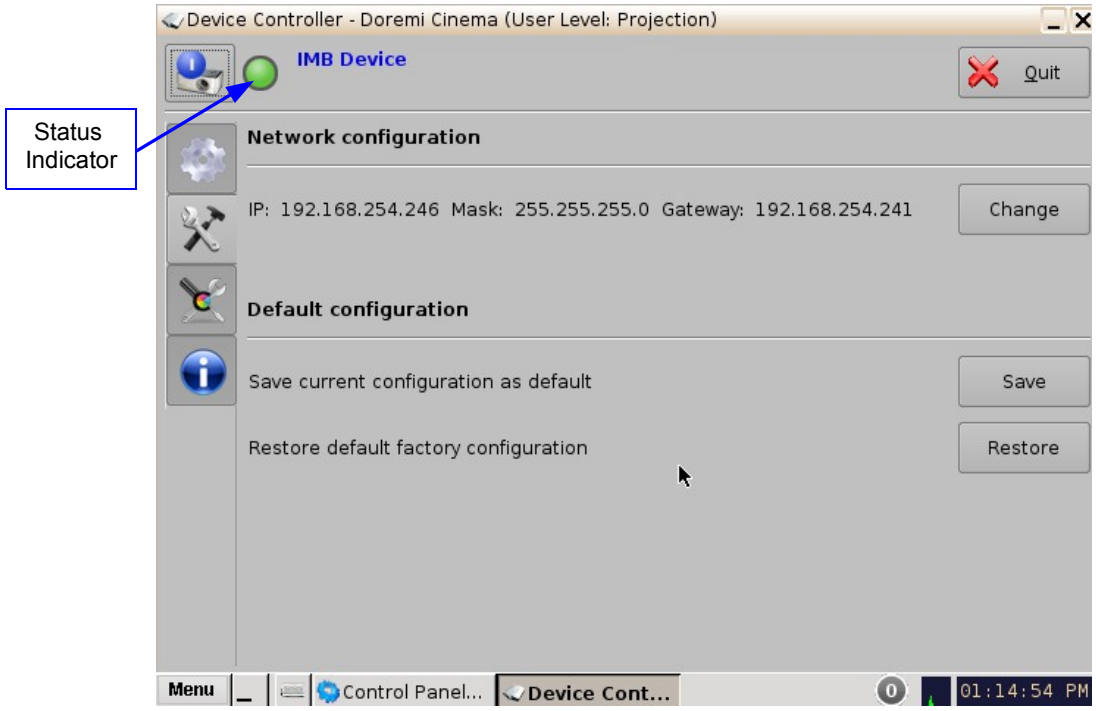


Figure 90: Device Controller GUI - Projector Device Added

- The following networking configuration information is displayed:
  - IP
  - Mask (sub-network mask)
  - Gateway
- The user can also modify the network configuration by clicking on the "Change" button.
- "root" privileges are required to change the networking parameters. Now it will be possible to change the IP, mask, or Gateway.
- Click Ok to confirm the changes. These changes take immediate effect and they expire when you reboot the unit, being replaced by the default networking configuration.
- You can save these settings as "default" by pressing the Save button. These configurations will be effective even after a reboot.
- To restore the networking configuration to factory default, click on the Restore button. The factory default settings are:
  - IP
  - Mask
  - Gateway
- Make sure to click the "Save" button when finished setting the network configuration.

7.5.5 Color Space Settings Tab

- The third tab, called Color Space Settings, allows the user to modify the color space for HDMI and HDSDI inputs.

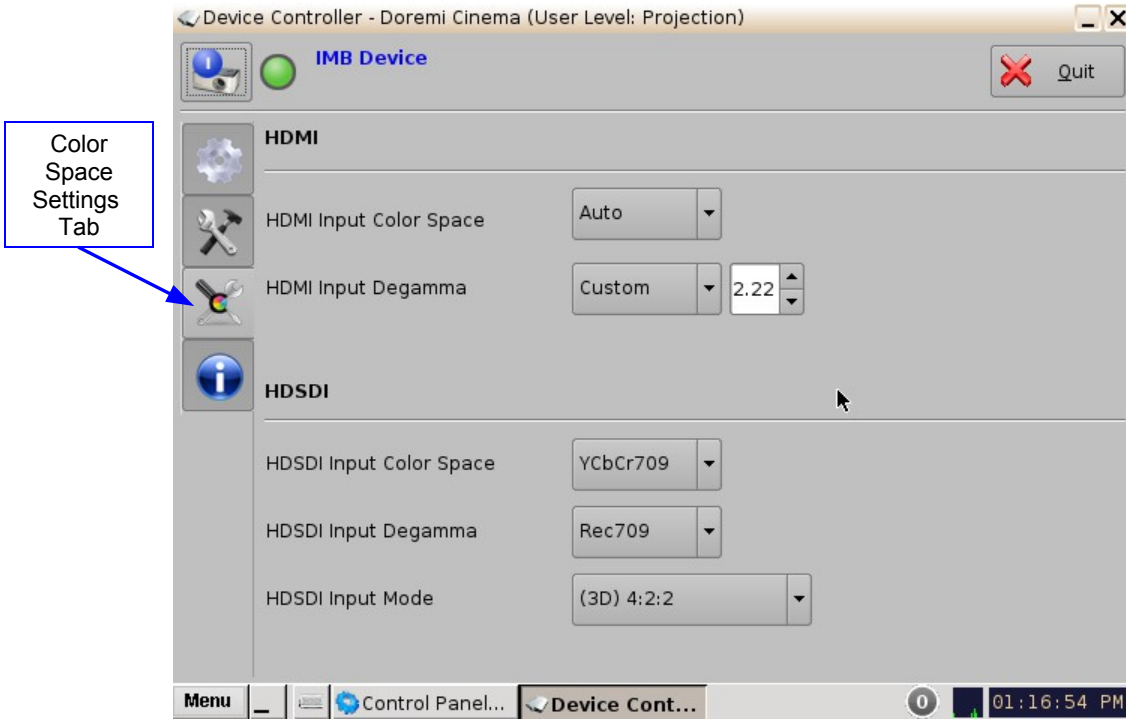


Figure 91: Settings Tab

7.5.5.1 HDMI Color Space Settings

- HDMI Input Color Space: Click on the arrow on the drop-down menu and select the desired color space standards from the list.
  - Auto
  - YCbCr709
  - YCxCz
  - XYZ
- HDMI Input Degamma: Click on the arrow on the drop-down menu and select the desired degamma factor from the list.
  - Rec709
  - DCI
  - Custom: Choose the desired degamma factor value in the numeric field using the arrows.

7.5.5.2 HDSDI Color Space Settings

- HDSDI Input Color Space: Click on the arrow on the drop-down menu and select the desired color space standards from the list.
    - YCbCr709
    - RGB709
    - YCxCz
    - XYZ
- HDSDI Input Degamma: Click on the arrow on the drop-down menu and select the desired degamma factor from the list.
    - Rec709
    - DCI
    - Custom: Choose the desired degamma factor value in the numeric field using the arrows.
- HDSDI Input Mode: Click on the arrow on the drop-down menu and select the desired Input Mode from the list.
    - (2D) 4:4:4 Dual Link
    - (3D) 4:2:2

7.5.5.3 HDSDI Input

The following are 2D formats that are currently supported on the HDSDI input of the IMB:

Aspect ratio\fps	23.98	24	25	29.97	30	47.95	48	50	59.94	60
720p									X	X
1080i	X	X	X	X	X					
1080p	X	X	X	X	X					

7.5.6 Information Tab

- The 4th tab will display the following useful identification information for the controlled device:
    - Firmware version
    - Main Board revision
    - Running Mode
    - Serial Number
    - Software Version

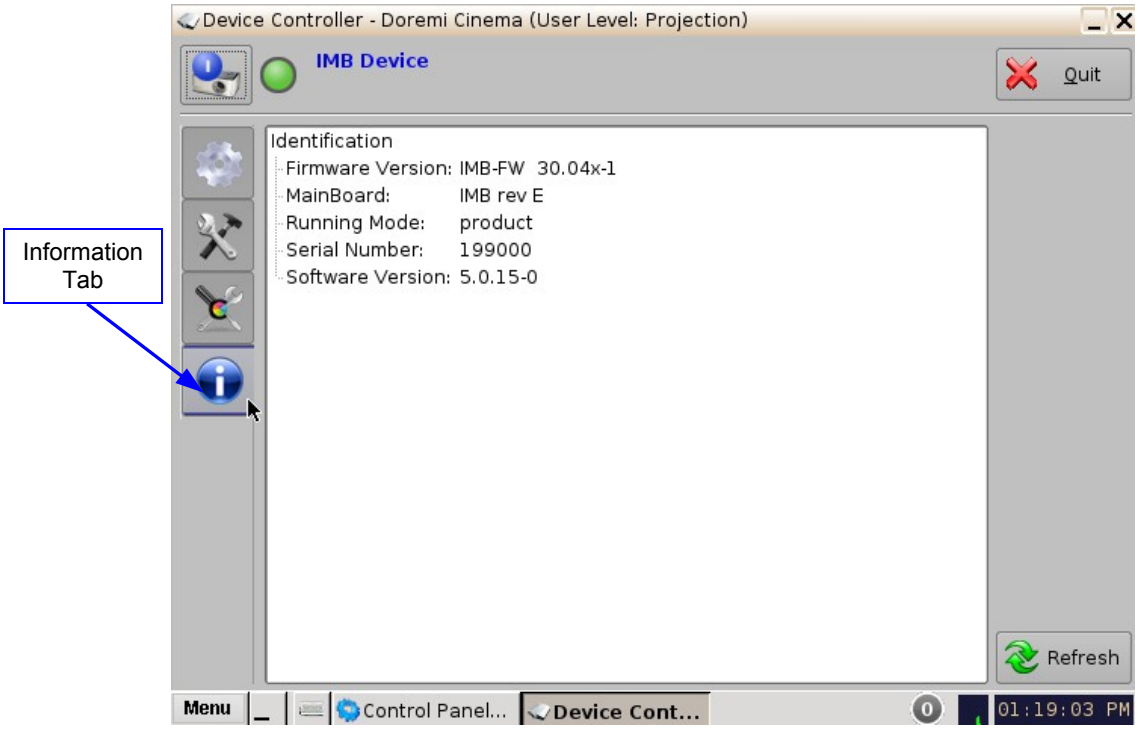


Figure 92: Information Tab

- Use the Refresh button to refresh information about the controlled device.
- Click Quit to exit the application.

7.5.7 Auto Detect Tab

This tab is currently not functional. It will be used in future software releases.

7.5.8 Manual Tab

If the device is created manually in the Manual tab, then it will be temporary and will be lost once the application is closed, or the unit rebooted.

- The following information is required to configure the device manually:
    - Device Name: It is recommended that the user use a relevant name.
    - Device Type: Click on the arrow for the list of supported devices.
    - IP Address: IP address of the device to control. Sony projectors are always set with IP 127.0.0.1.
    - Port: This information is automatically populated after choosing the Device Type.
        - Sony Primary Projector -> Port Number: 53484
        - Sony Secondary Projector -> Port Number: 53485
        - IMB -> Port Number: 43751

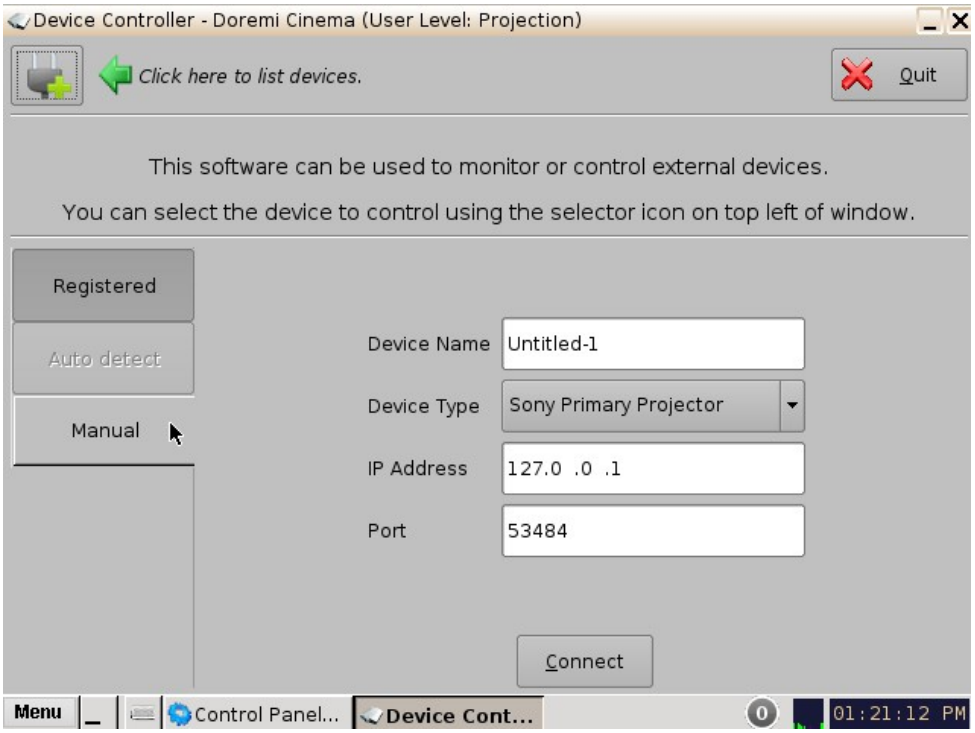


Figure 93: Manual Tab

7.6 Device Manager

- The Device Manager is an application used to configure the connection between a unit and cinema projector(s). It also provides for the use of Ethernet commands for the control of theater automation devices.
- To run the Device Manager, go to Menu → Doremi Apps. → Device Manager.
- The following window will appear:

Figure 94: Device Manager

7.6.1 Adding a Projector

- To connect a projector to the unit (server), click the Add button (Figure 94).
- The Add Device window will appear:
- Select Projector and click the Add button as illustrated below:

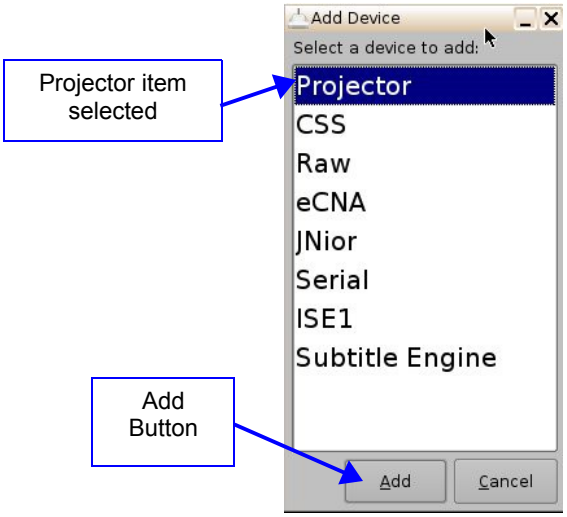


Figure 95: Device Selection Window – Projector Item Selected

- The main configuration window will be updated to reflect the addition of the Projector device. The user will be able to enter the projector parameters as illustrated below:

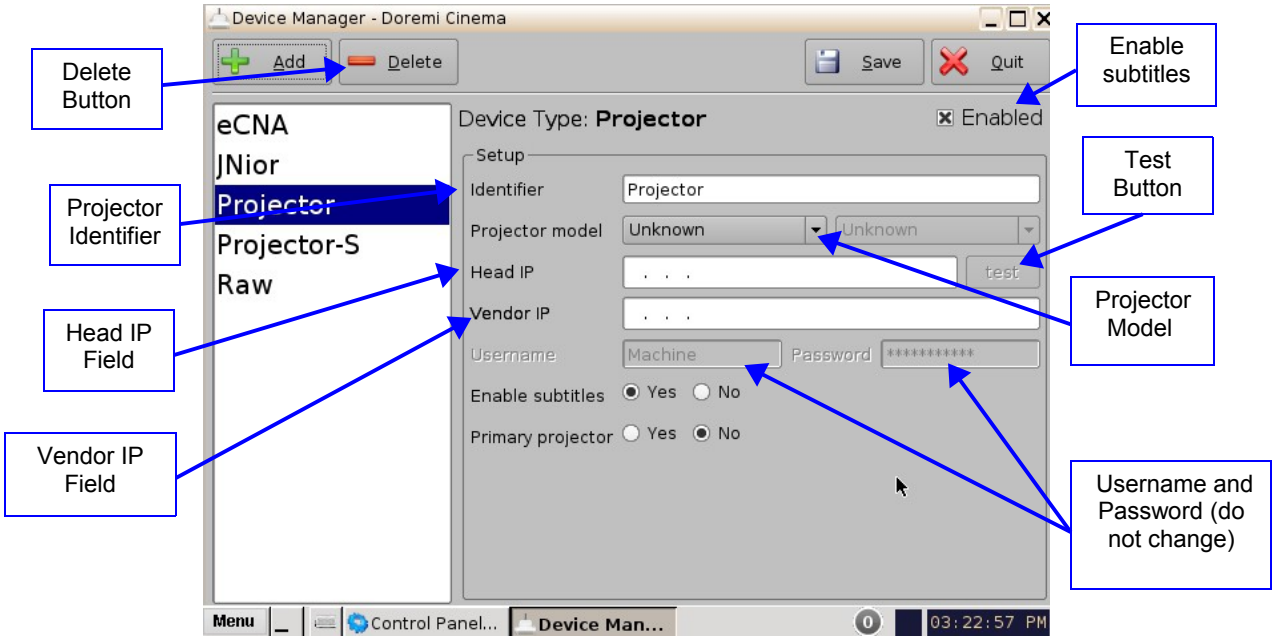


Figure 96: Device Manager GUI – Projector Fields Configuration

To perform the projector configuration, follow the steps below:

- Specify a projector identifier (e.g., projector name, screen #) in the first field.

Note: The selection of primary and secondary projectors only applies to Sony SRX Projectors. For all other projector types, please select Primary. Also, this could apply if the user were to use dual projector for 3D (left projector would be Primary and right projector would be Secondary).

- Choose the correct projector model to connect to the unit using the Projector model field(s).
- Select the model series for the projector from the drop-down menu on the right. The projector model series varies for all projector manufacturers.
- Enter the Head IP address, and then click the test button.
- If the DLP Head Connection Test fails, the IP address is invalid.
- Choose to either enable or disable the subtitles.

Note: If the user enables subtitles without the unit being connected to a projector, then the server will not operate properly.

- Check the Enabled check box at the top right corner of the GUI.
- Click the Save button to record the settings. A password confirmation page will appear. Enter the password to save and record the settings.

7.6.2 Removing a Device or Projector

- To remove a device or projector, click on it in the left part of the Device Manager GUI.
- Click the Delete button (Figure 96).

7.6.3 Automation Libraries Management

- Support for theater automation control is also provided. The list of currently supported devices is the following:
  - eCNA
  - JNior
  - A pre-built library of supported automation commands are available for each of these two devices. These automation commands can then be added to Macro Cues.

7.6.4 Adding an eCNA Device

- To add the eCNA device, click the Add button in the Device Manager window (Figure 97).
- The Add Device window will appear. Select eCNA and click the Add button.
- The Device Manager GUI will be updated to reflect the addition of the eCNA device.
- Input the eCNA Server IP address in the appropriate field as illustrated below:

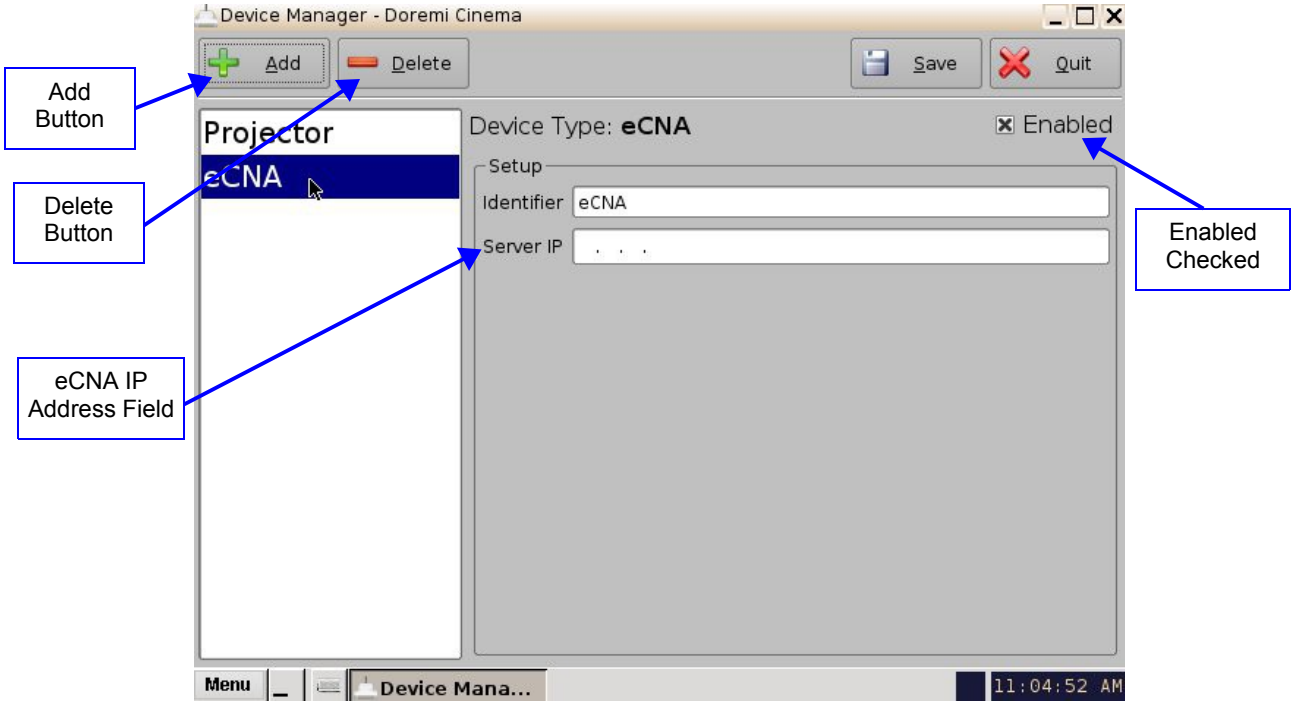


Figure 97: Device Manager GUI – eCNA Device Configuration

- If not already done, check the Enabled check-box in the top-right corner of the GUI.
- Click the Save button to record the settings. A window asking for the password will appear. Enter the password to save the settings and proceed.
- Click Quit when finished with the configuration. If not, continue and add more devices.

7.6.4.1 Removing an eCNA Device

- To remove the eCNA device, select it in the Device Manager GUI and click the Delete button (Figure 97).

7.6.5 Adding a JNior Device

- To add the JNior device, click the Add button in the Device Manager window.
- The Add Device window will appear. Select JNior and click the Add button.
- The Device Manager GUI will be updated to reflect the addition of the JNior device (Figure 98).
- Input the JNior Server IP address in the appropriate field as illustrated below (Figure 98).

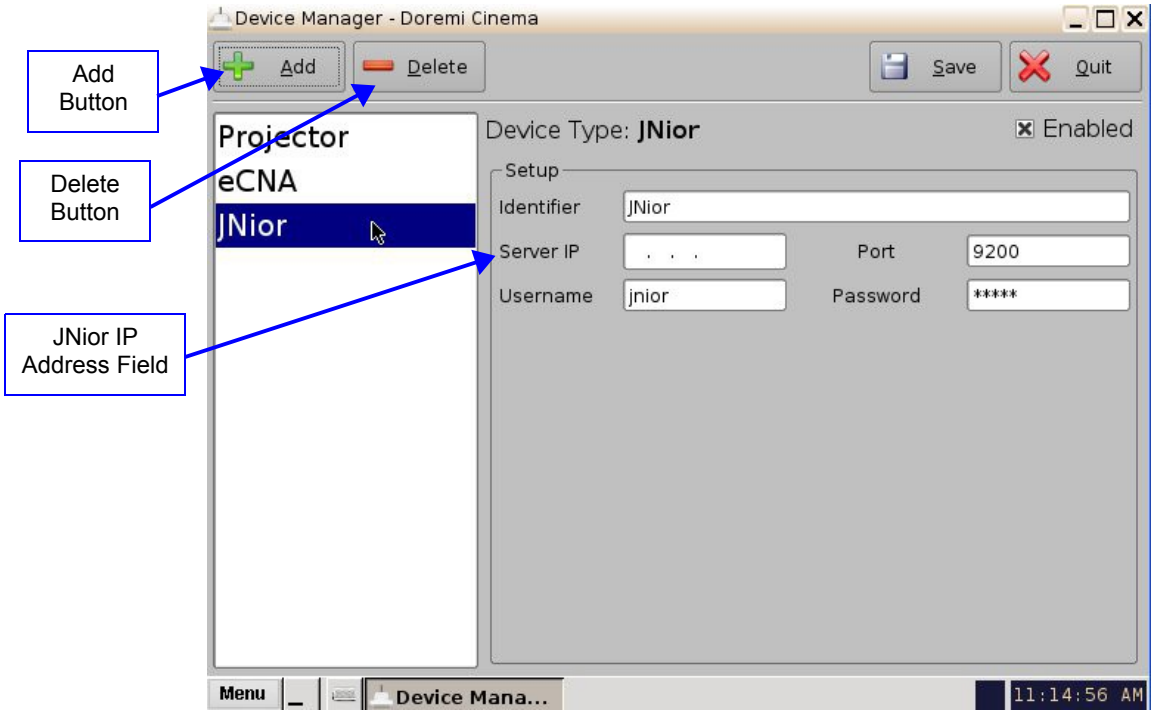


Figure 98: Device Manager GUI – JNior Device Configuration

- The port number field will already contain the appropriate value (factory default value).

Note: The JNior device documentation will provide the correct username and password (factory default values).

- Click the Save button to record the settings. A window will appear asking for a password. Enter the password to proceed.
- Click Quit when finished with the configuration. If not, continue and add more devices.

7.6.5.1 Removing a JNior Device

- To remove the JNior device, click on it in the Device Manager GUI.
- Click the Delete button (Figure 98).

7.6.6 Adding a Raw Device

- A Raw device allows for communication with an external device across an Ethernet connection using Raw data formatted as text or binary strings.
- To add a Raw device, click the Add button.
- The Add Device window will appear. Select Raw and click the Add button.
- The Device Manager GUI will be updated to reflect the addition of the Raw device (Figure 99).
- Input the name of the Raw device in the Identifier field.

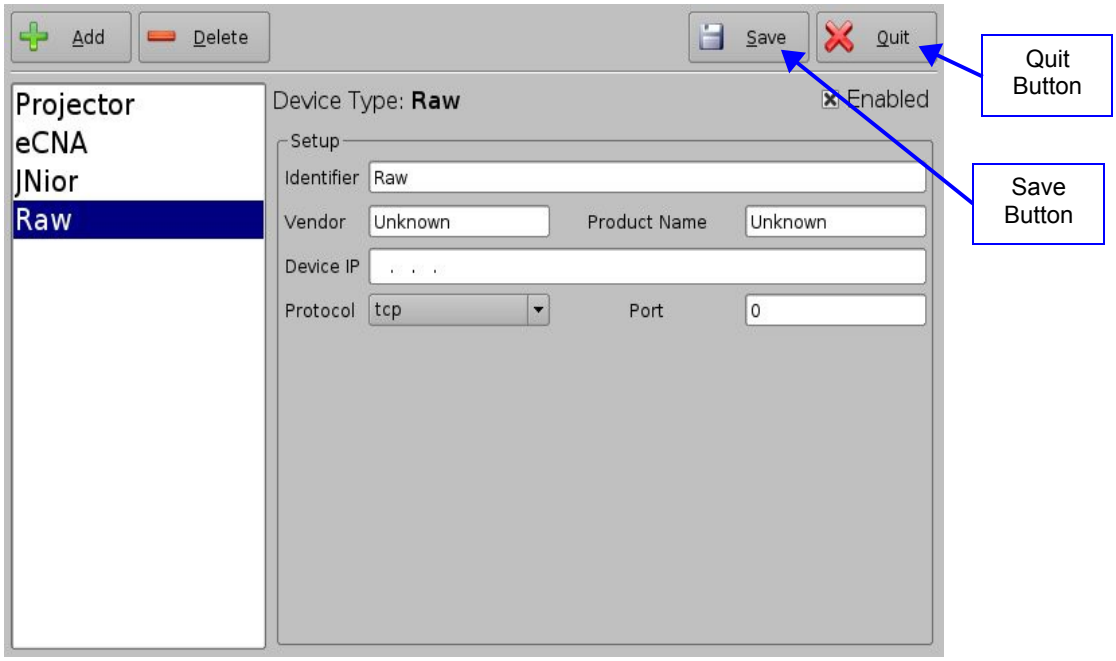


Figure 99: Device Manager GUI – Raw Device Configuration

- Specify a vendor name in the Vendor field.
- Specify a product name in the Product Name field.
- Enter the IP address of the Raw device in the Device IP field (Figure 99).
- Choose the protocol to be used (TCP or UDP) and the proper Port number.
- Click the Save button to record the settings (Figure 99). A window will appear asking for a password. Enter the password to proceed.
- If finished with the configuration, click the Quit button.

7.6.7 Removing a Raw Device

- To remove the Raw device, click on it in the Device Manager GUI and press the Delete button (Figure 99).

7.6.8 Adding a Serial Device

- The Serial device is used to be able to manage incoming and outgoing messages over a serial port. It is a new feature that allows the user to control or interact with some old legacy device that usually communicates only through serial cables. Outgoing messages can be sent to the automation using a simple basic automation cue. Incoming messages are parsed, and then sent to the playback engine in the form of a signal trigger.

- The schema below explains how the daemon is run:

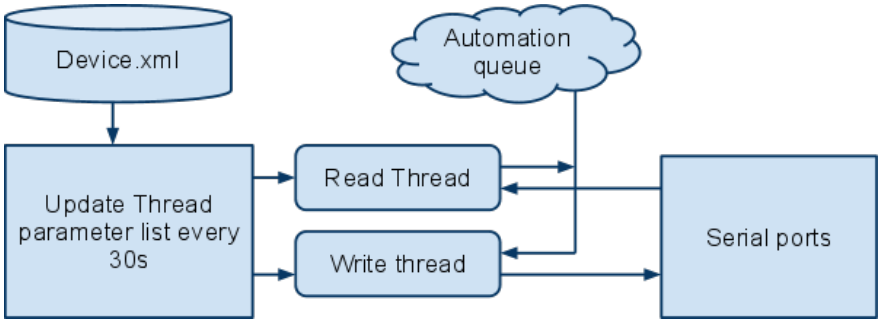


Figure 100: Serial Device Schema

- The file device.xml contains all elements to configure properly the serial port and how to scan incoming messages. This file is conveniently managed by the Device Manager GUI application. The generic serial device driver can manage different serial ports simultaneously.
- Go to Menu → Doremi Apps. → Device Manager and follow the steps below. The following window will appear:

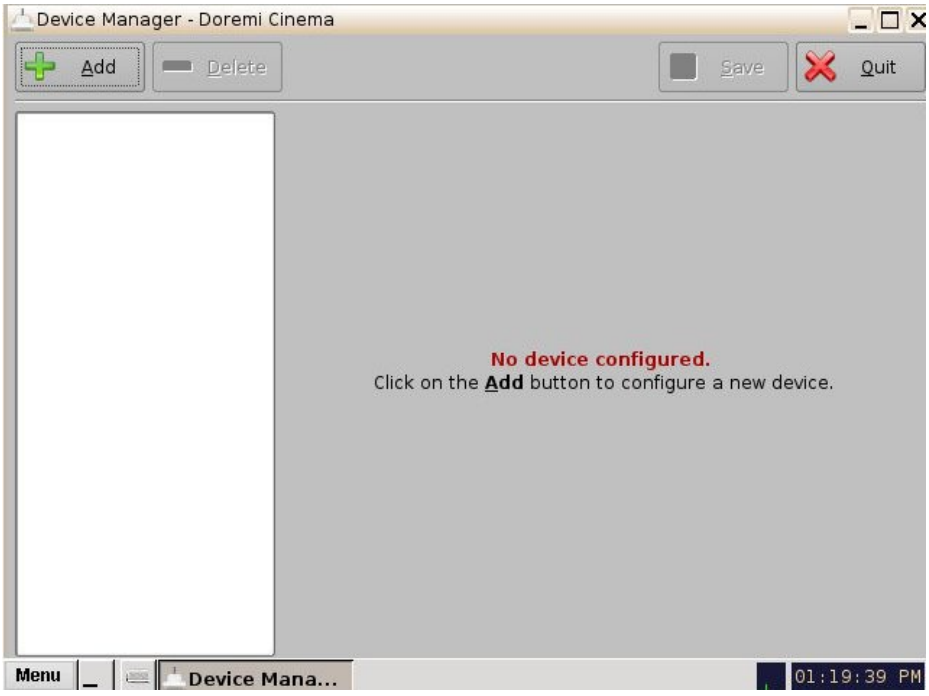


Figure 101: Device Manager GUI

- Click on the Add button and select the item Serial from the pop-up list.

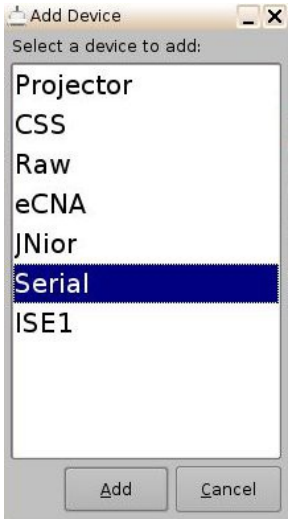


Figure 102: Add Device Window

- Click the Add button (Figure 102). The following window will appear (Figure 103):
- It is necessary to provide some configuration parameters in the window:
  - Identifier is the friendly name of the new configured device.
  - Serial Port is the internal device system filename the device driver will communicate to.
  - Usual values are: /dev/ttyS0 for embedded serial port on the motherboard and /dev/ttyUSB0 for any USB-serial converter.

- Speed, Data, Stop Bits, Parity and Flow control are usual parameters used to configure serial communication. Refer to the original automation documentation to find out what the correct values are. Usual value is 115200 8N1. No flow control.

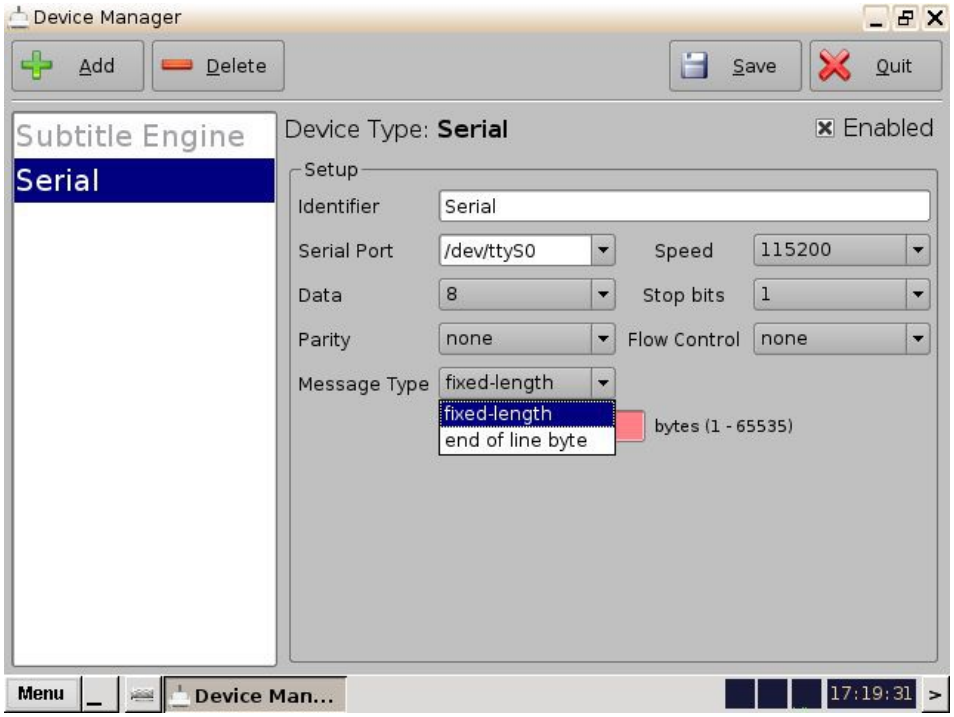


Figure 103: Device Manager GUI - Serial Device Added

- Message type: This parameter indicates how incoming text will be parsed to build messages. In order to match most existing protocol, two different incoming message types are handled.
  - Fixed length messages: All messages are always expected to be the same length. The user has to provide the message length parameter.
  - End of message character: All messages are expected to have a special "magic" character to indicate the end of message. This type matches most text-based protocol with an end of line character (\n) to validate the entry. The user has to provide the end of message "magic" character. Multiple character sequence is not supported (e.g., \r\n). Note that the "magic" character will NOT be part of the message sent to the playback engine.
- Save the new configuration.

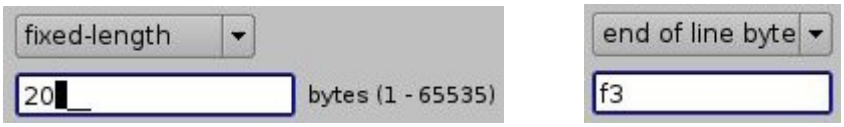


Figure 104: Fixed-length and End of message Examples

Note: It may take up to 30 seconds before the new configuration is applicable.

- After the serial device has been configured, the user can set the trigger from the serial port or automation actions to serial port.

7.6.9 ISE1 Device

- The ISE1 Device provides for communication with the IMAX Secure Enclosure. If more information is needed, please contact Doremi Labs Technical Support (Section 1.3).

7.6.10 CSS Device

- The CSS Device provides for communication with the Sony Cavity Security System. If more information is needed, please contact Doremi Labs Technical Support (Section Section 1.3).

7.6.11 3D Configuration

- When using a DCP-2000 or DCP-2K4 configuration for 3D presentation, the projector needs to be set to the proper color space. Contact the projector vendor to configure the projector properly.

7.6.11.1 Dolby 3D Support

- To enable the Dolby 3D support, please contact Doremi Labs Technical Support to receive the appropriate license (Section 1.3).

7.6.11.2 RealD 3D Support

To enable the RealD 3D support, please contact RealD at cinema-support@reald.com to receive the appropriate license. Once the license has been received, follow the steps below:

- Open the Device Manager GUI by clicking on Menu → Doremi Apps. → Device Manager.
- The following window will appear:

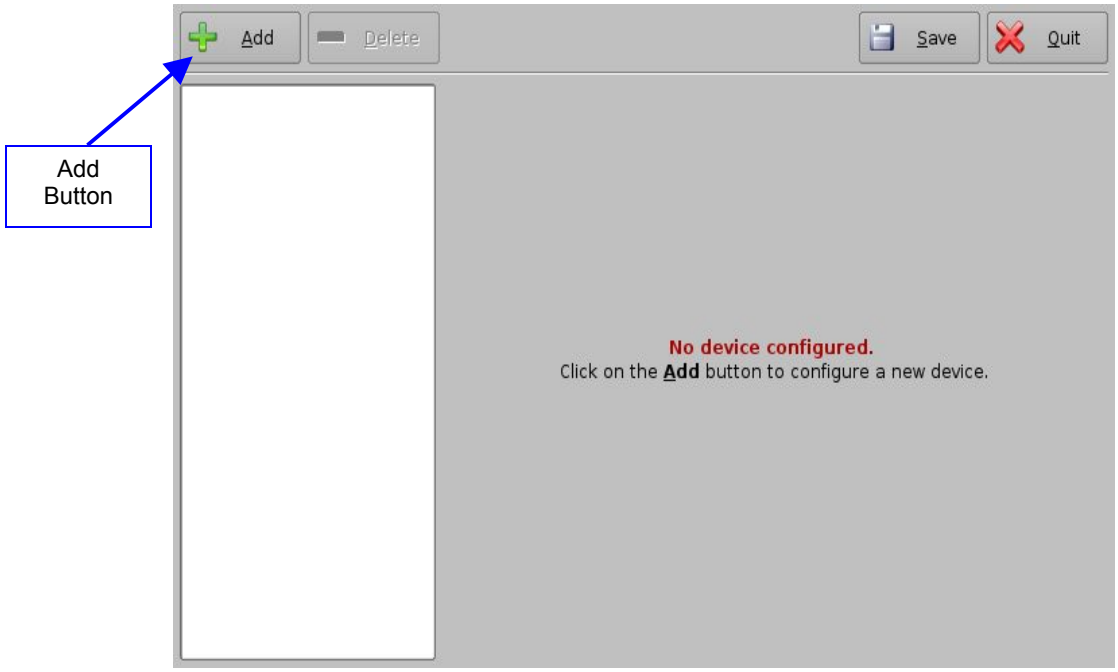


Figure 105: Device Manager GUI

- Click the Add button.
- The list of available devices will appear as presented below:

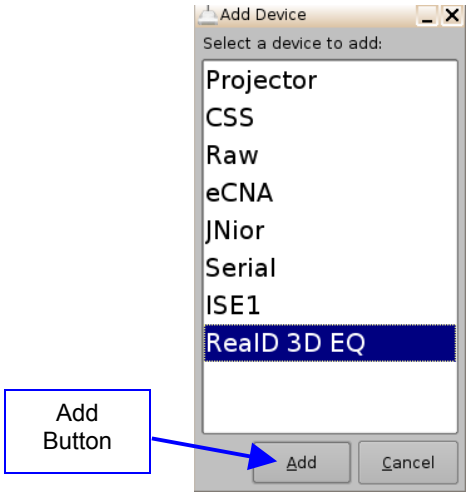


Figure 106: List of Available Devices

- Select the RealD 3D EQ device and click the Add button (Figure 106).
- The device will be visible on the main Device Manager GUI as illustrated below:

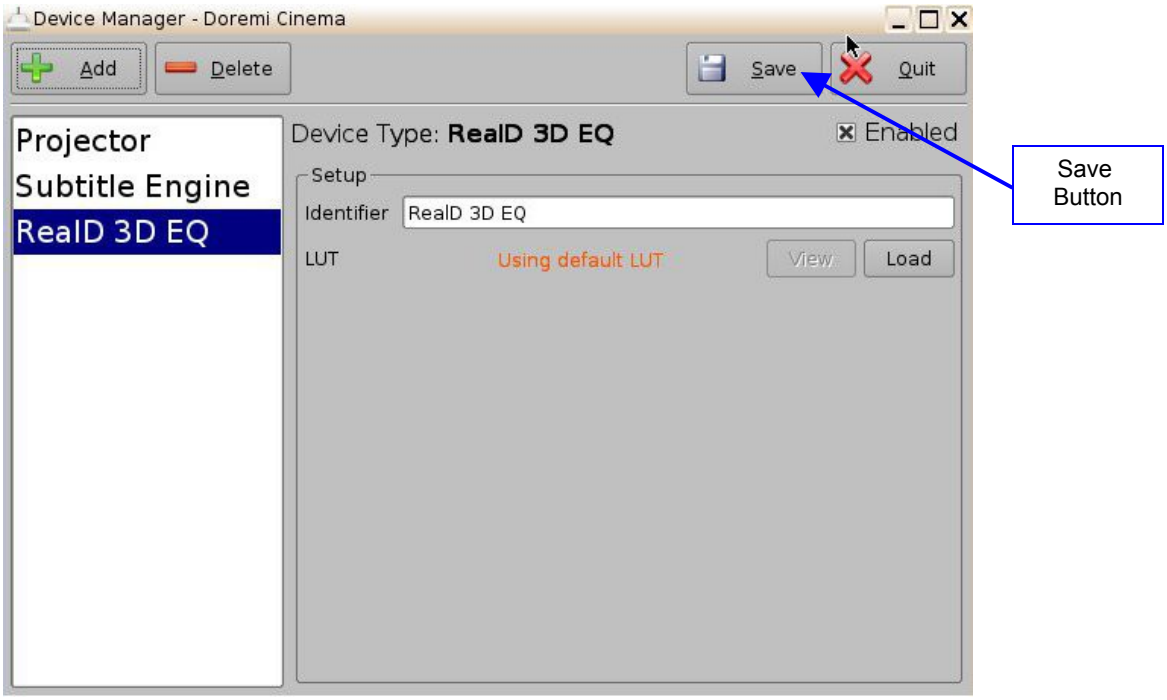


Figure 107: RealD 3D EQ Device Added

- To complete the configuration, click the Save button (Figure 107). Enter the appropriate password and click Ok.

7.6.11.3 Sensio 3D Support

- To enable the Sensio 3D support, please contact Doremi Labs Technical Support to receive the appropriate license (Section 1.3).

7.6.12 Closed Caption Support

- To enable the Rear Window devices Closed Caption support, install the appropriate license. For information about the Closed Caption Support, contact Doremi Labs Technical Support (Section 1.3).

7.6.13 Subtitle Engine Configuration

This sections provides instructions on how to set up the Device Manager for Subtitle Engine support. It will allow the user to burn subtitles into the picture before being exported to the projector. Once the license has been received, follow the steps below:

- Open the Device Manager GUI by going to Menu → Doremi Apps. → Device Manager.
- The following window will appear:

Figure 108: Device Manager GUI

- Click the Add button (Figure 108).
- The Add Device window will appear:

Note: In case the user already has a projector configured through Device Manager to display subtitles, meaning that the Enable subtitle filed was set to Yes, adding the Subtitle Engine device will cause a warning window to appear asking the user to disable all projector subtitle display. The Subtitle Engine will burn the subtitle inside the picture before exporting the resulting pictures to the projector. If the user plans to use the Subtitle Engine, click the Yes button in the warning window to disable all projector subtitles (Figure 109).

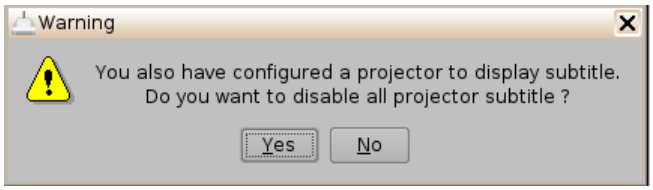


Figure 109: Subtitle Engine Warning Window

- Select the Subtitle Engine device and click the Add button.
- The device will be visible on the main Device Manager GUI as illustrated below:

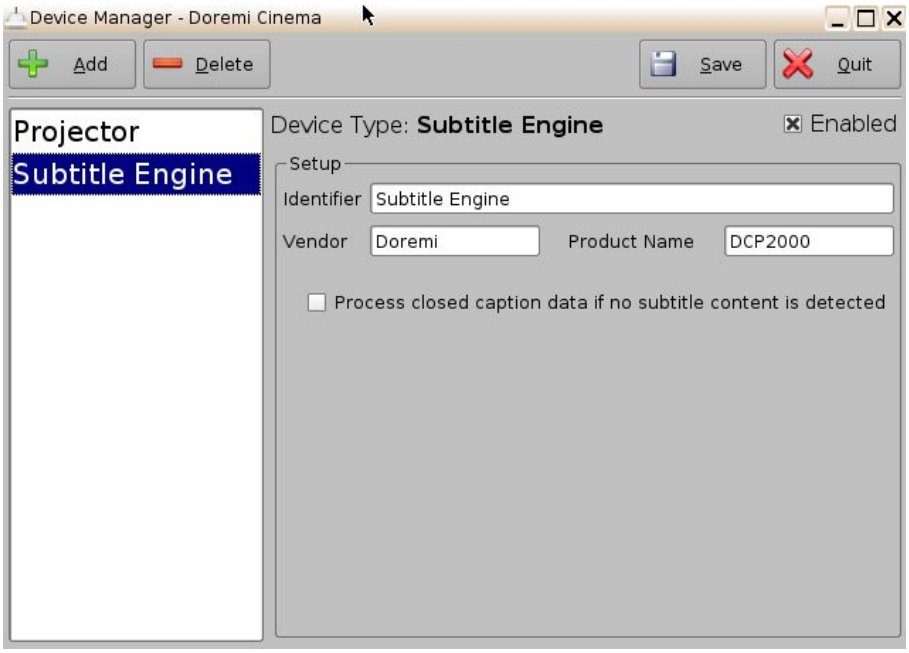


Figure 110: Subtitle Engine Added

- To complete the configuration, click the Save button (Figure 110).The user will be asked for a password. Enter the appropriate password and press Ok.

7.7 Diagnostic Tool

- To use the Diagnostic Tool application, please see document number "DTL.OM.000169.DRM," which is entitled, "Diagnostic Tool User Manual." Contact Doremi Labs Technical Support to receive this document (Section 1.3).

7.8 Language Setup

All applications are available for multi-language support except:

- Diagnostic Tool
- License Manager
- Live Manager
- Log Manager
- Log Operator Maintenance
- Networking Configuration
- Touchscreen Calibration

Note: Make sure that no application is open before setting the language.

- To change the language used on the unit, double-click the Language Setup icon in the Control Panel window.
- The user will be asked for a password.
- The following Language Setup window will appear:

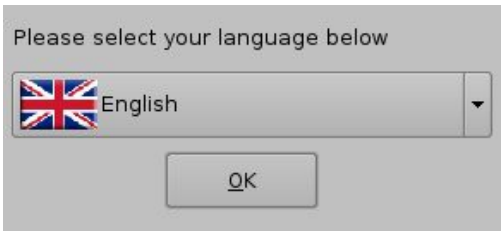


Figure 111: Language Setup Window - English

- Use the list-box to choose desired language, for example, Espanol (Figure 112).

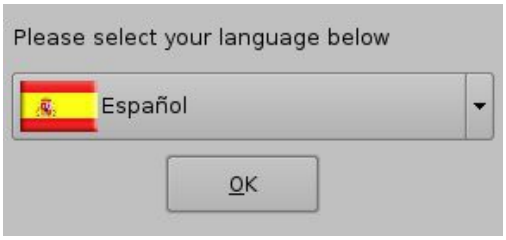


Figure 112: Language Setup Window - Espanol

- The available languages include:
    - German (supported)
    - English (supported)
    - Spanish (supported)
    - French (supported)
    - Norwegian (supported)
    - Polish (supported)
    - Portuguese (supported)
    - Russian (Font file package required)
    - Arabic (Font file package required)
    - Chinese (Font file package required)
    - Japanese (Font file package required)
    - Taiwanese (Font file package required)
    - cs-CZ – Czech (Font file package required)
- Click the OK button when finished selecting the language.
- The unit language will be updated as illustrated in the CineLister GUI shown below:

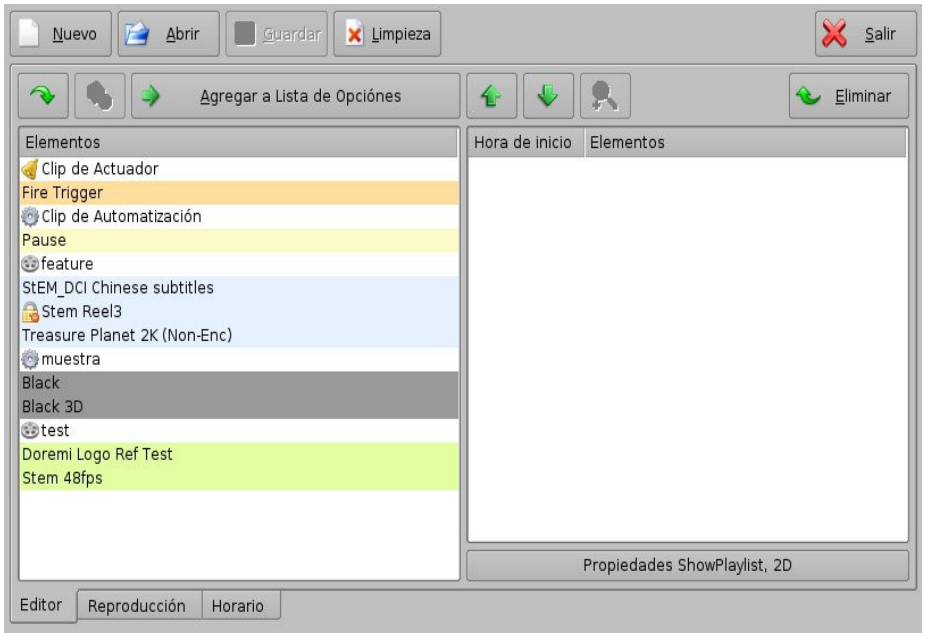


Figure 113: CineLister GUI – Spanish Language Used

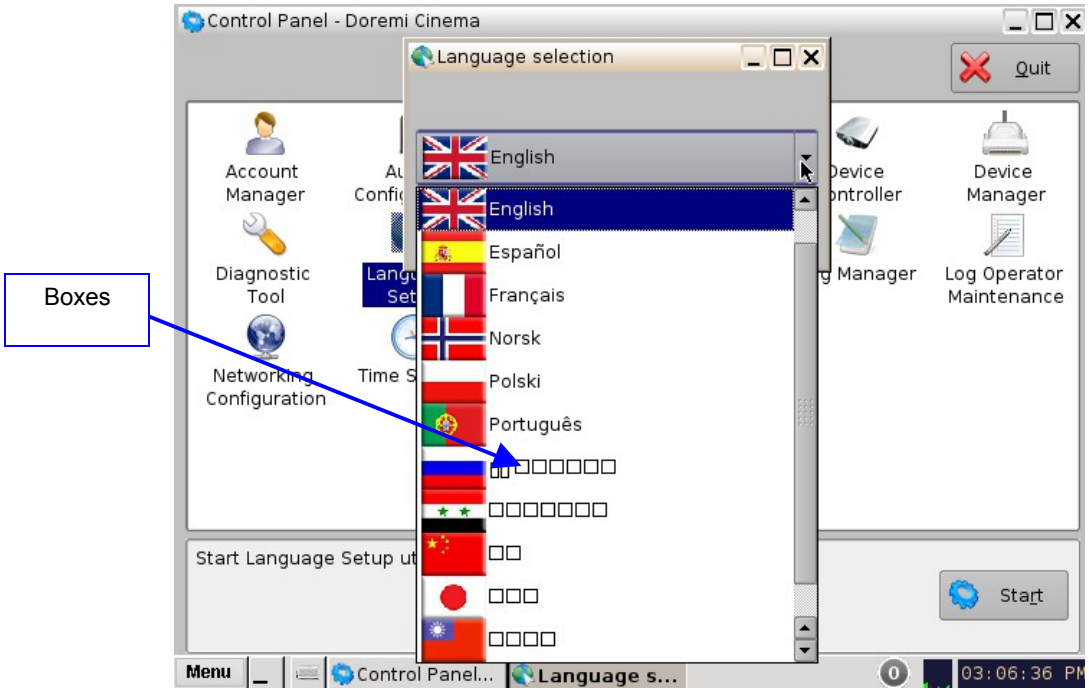


Figure 114: Language Setup Drop-Down List

Note: These boxes (Figure 114) indicate that the font file package is needed. Contact the local Doremi Technical Support to obtain the appropriate font file package.

7.9 License Manager

- To access the License Manager GUI, double-click the License Manager icon available in the Control Panel.
- The following window will appear (if no licenses are installed on the unit):

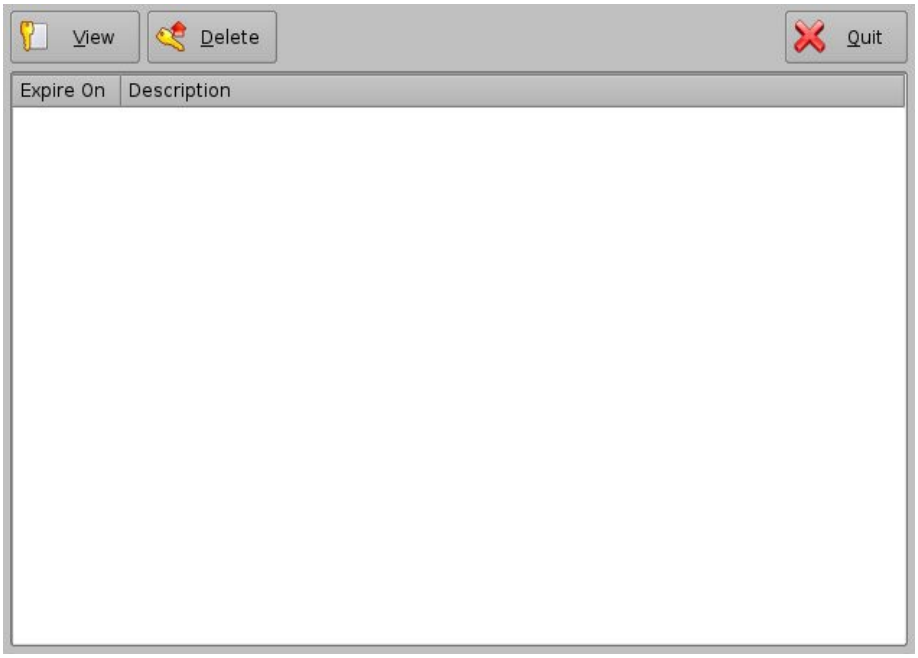


Figure 115: License Manager GUI

7.9.1 Adding a License

- To add a license, have the license file on a USB flash drive and plug it into a USB port on the unit.
- The Ingest Manager GUI will appear as illustrated below:

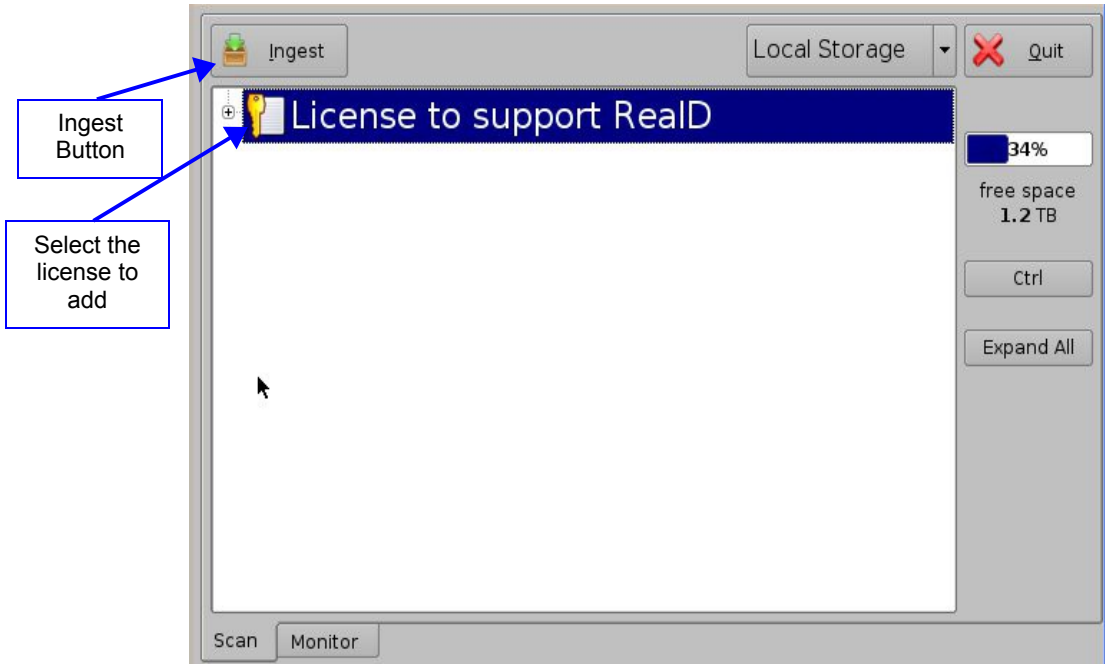


Figure 116: License Ingest Example

- Select the license file(s) to install and click the Ingest button.
- The user will be asked for a password. Enter the appropriate password and press Ok.
- It is not necessary to reboot the unit (See Note below).
- Go back to the License Manager GUI from Menu → Control Panel. The ingested license(s) will be visible as illustrated below:

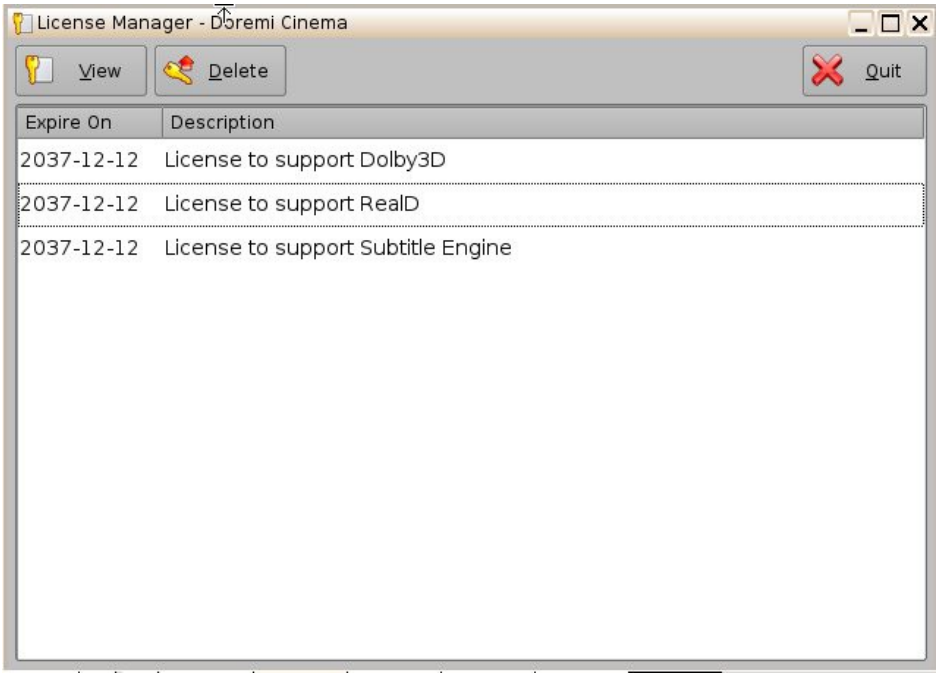


Figure 117: License Manager GUI – Three Licenses Added

- To view the details of an available license, select it and click the View button.

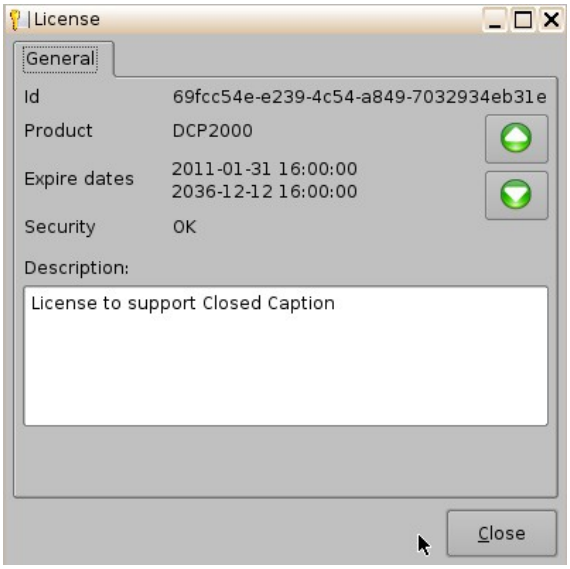


Figure 118: License View Window

- The License Information window will appear providing the validity window of the license.
- To delete a license from the unit, select it within the License Manager GUI and click the Delete button.
- After ingesting a license, the associated device (e.g., “Subtitle Engine,” “Dolby DFC 100”) will be visible in the Device Manager GUI.

7.10 Live Manager

- The Live Manger application allows the user to add a Virtual Device as a source of a live event. These live CPLs can be added to Show Playlists in Cinelister.
- To access the Live Manager GUI, double-click the Live Manager icon within the Control Panel GUI.
- The user will be asked for a password. Enter the appropriate password to continue (Figure 119).

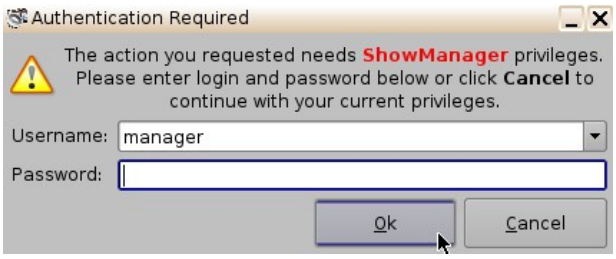


Figure 119: Password Confirmation Window

- The following window will appear:

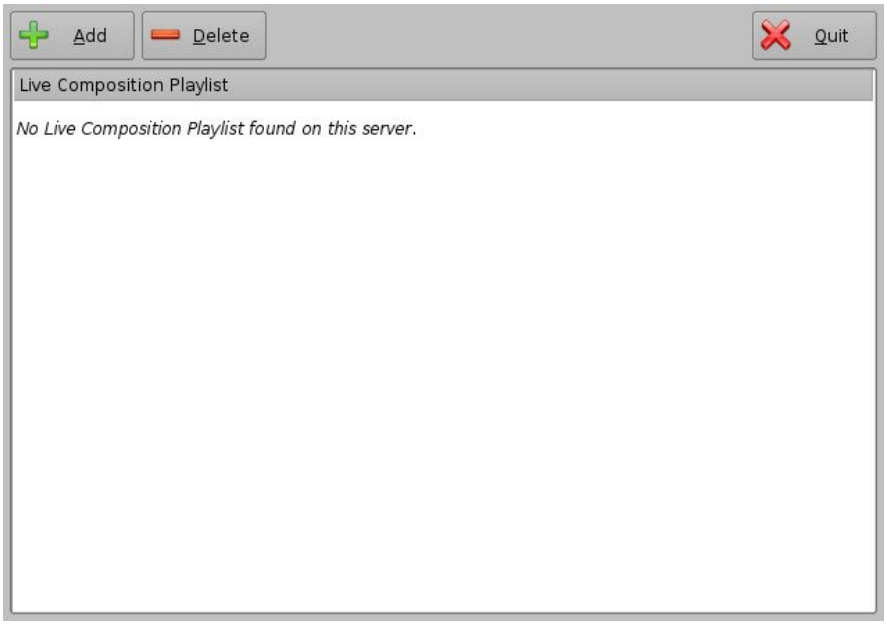


Figure 120: Live Manager GUI

7.10.1 Creating a Live Event

- To create a live CPL, allowing a live event, click the Add button.
- The following wizard window will appear (Figure 121):

Step 1 of 3
This wizard will help you to create a new Live Composition on this server.
To continue, select the live source device type:
Doremi Live Streamer
Back
Next
Cancel

Figure 121: Live Manager – Live CPL Creation Wizard Step 1

- Select the live source device type.
- Click the Next button. The next wizard window will appear.
- Enter the IP address of the external Live Event box in the Device IP field (Figure 122).
- Enter the live CPL content title in the Content Title field (Figure 122).

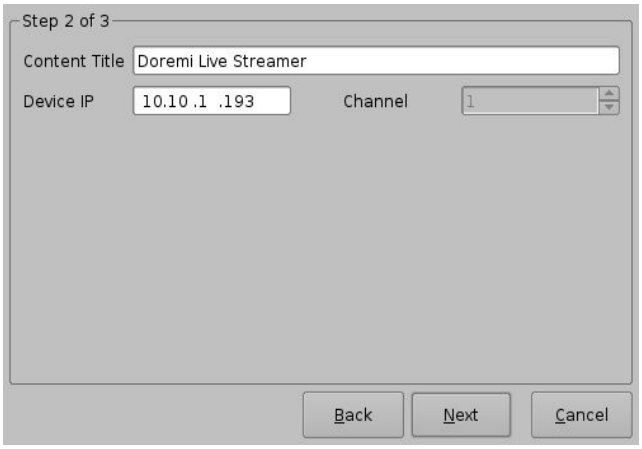


Figure 122: Live Manager – Live CPL Creation Wizard Step 2

- Click the Next button.
- Click the Finish button to complete the live CPL creation (Figure 123).

Figure 123: Live Manager – Live CPL Creation Wizard Step 3

- Clicking the Finish button will make the Live CPL visible in the Live Manager main window (Figure 124).

Figure 124: Live Manager – CPL Created

Note: The MPEG Streamer format is dynamically handled. This means that the 4:2:2 vs 4:2:0 parameter is automatically detected from the MPEG stream itself. There is no need to provide this information to the playback engine.

- Repeat the steps above as many times as necessary to generate another live CPL.
- To use the Live CPL, allowing a live event, open CineLister (go to Menu → Doremi Apps. → CineLister).
- The newly created live CPL will be visible under “live” in the left part of the Editor tab allowing the user to insert it in a Show Playlist like any standard CPL.

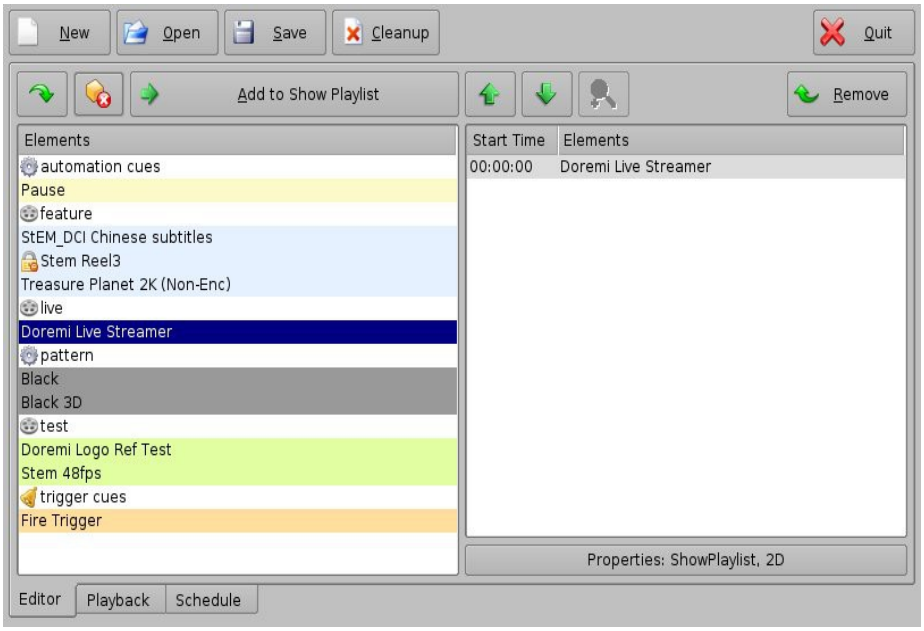


Figure 125: CineLister – Live CPL Inserted in a Show Playlist

7.10.2 Deleting a Live CPL

- To delete an existing live CPL, select it in the Live Manager window and click the Delete button.

7.11 Log Manager

- The Log Manager application is a graphical user interface (GUI) that can be set up to automatically upload SMPTE and System logs to designated FTP sites. The log can be generated at a specific time (on a daily basis) and stored/uploaded locally or into a remote FTP server. The Log Manager application is available in the Control Panel.
- To open the Log Manager application, go to Menu → Control Panel and double-click on the Log Manager icon (Figure 126).

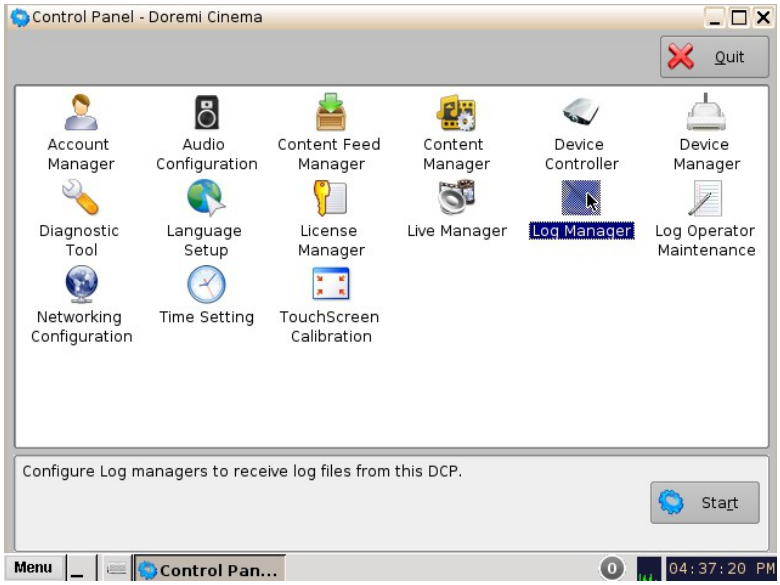


Figure 126: Control Panel

- The following window will appear:

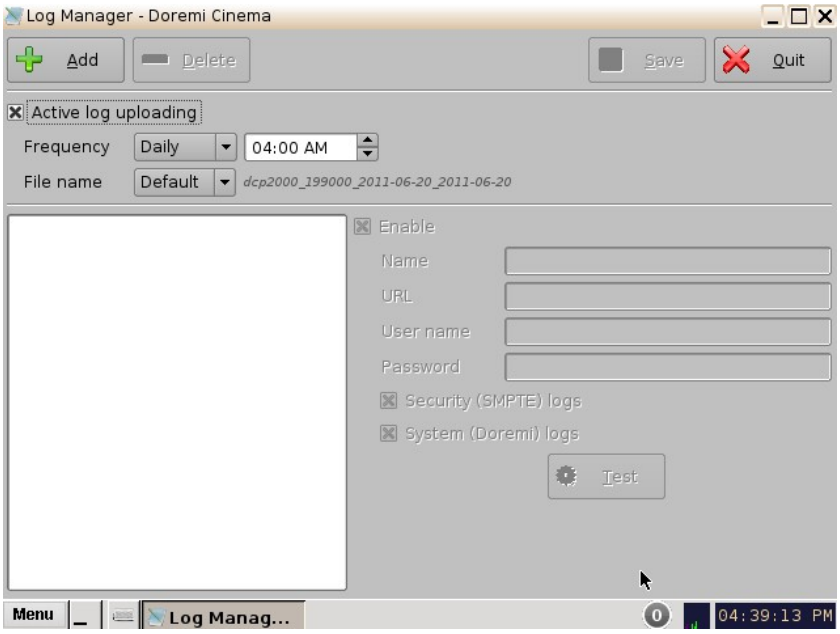


Figure 127: Log Manager Main Window

7.11.1 *Log Manager Configuration*

- Click the Add button to add a new server. The following window will appear:

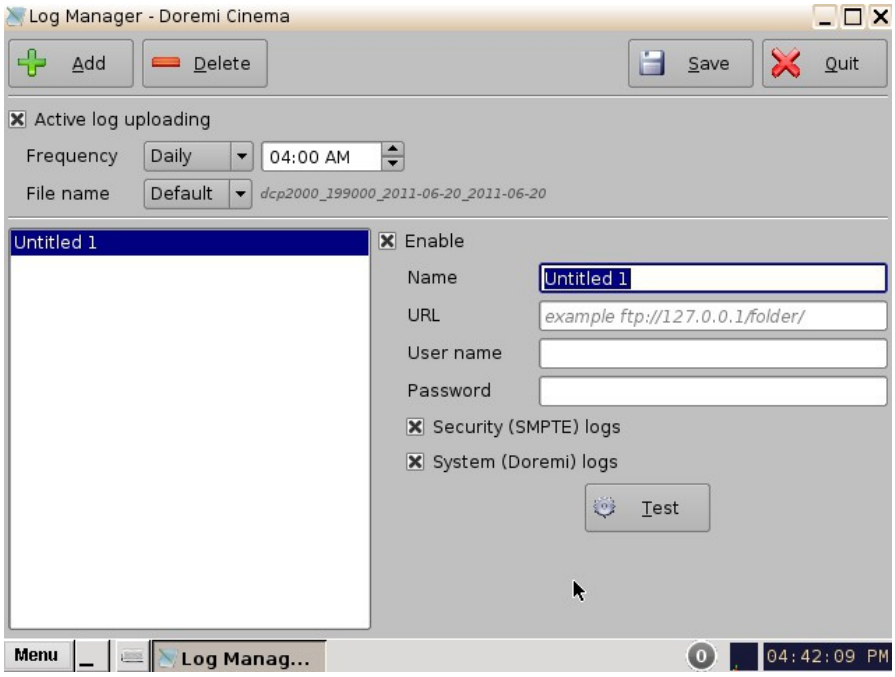


Figure 128: Log Manager Main Window

- Check the Enable box to make sure that the server becomes active (logs will be sent to the server).
- Select the Frequency of sending logs from options:
  - Daily → specify time
  - Weekly→ specify day and time
  - Monthly → specify date and time
- Select the file name from options:
  - Default: unit type, e-S/N, from date-to-date (e.g., dcp2000_213555_2011-05-05_2011-05-05)
  - Custom: specify a name for the file
- Enter the name of the server in the Name field.
- Enter the appropriate URL destination in the URL field. This represents the URL of an existing FTP site where the user would like to have the logs uploaded (e.g., ftp://127.0.0.1/folder/).
- Enter the username and password required for authentication to the FTP site.
- The Security and System logs are checked by default, meaning that they are included in the log upload.

- Un-check the Security (SMPTE) logs box to exclude the security logs into the log file that will be uploaded.
- Un-check the System (Doremi) logs box to exclude the System logs into the log file that will be uploaded.
- Once finished, click the Save button.
- Click the Test button to test the connection to the server where the logs will be uploaded.
- Delete a server by selecting it from the list and clicking the Delete button.
- To quit the application, click the Quit button.

7.12 Log Operator Manager

- The Log Operator Maintenance is an application that lets the operator log important information (e.g., hard disk replacement, projector lamp replacement, etc.). It will help the system administrator keep track of any change operated in a theater booth.
- The log records created with the Log Operator Maintenance application are stored for one year.
- The Log Operator Maintenance application is available in the Control Panel.
- To access the Log Operator Maintenance application, go to the Control Panel and click on the Log Operator Maintenance icon.

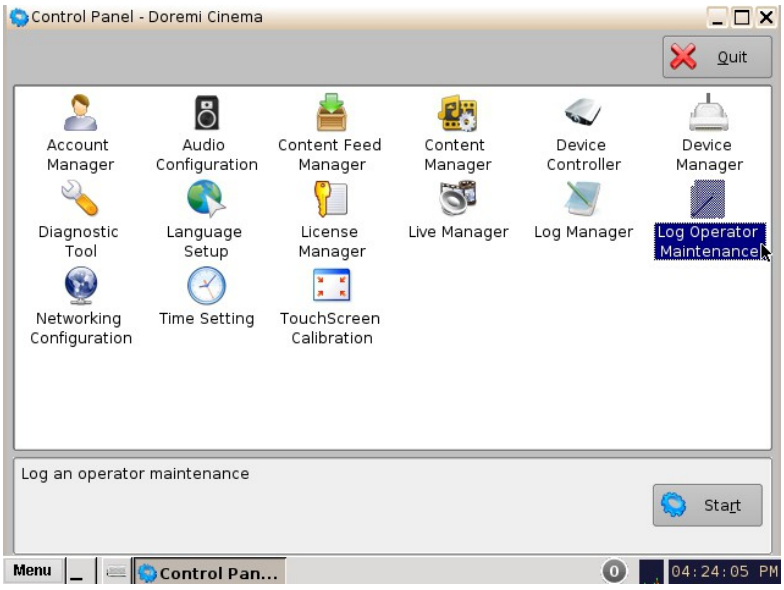


Figure 129: Control Panel

- The user will need to authenticate themselves as admin by inputting the correct password to be allowed to use this application.
- The following window will appear:

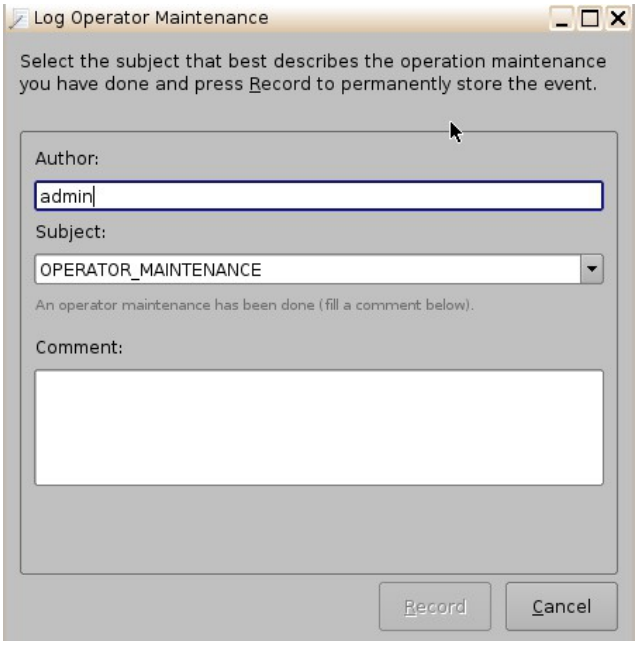

Log Operator Maintenance
Select the subject that best describes the operation maintenance you have done and press Record to permanently store the event.
Author:
admin
Subject:
OPERATOR_MAINTENANCE
An operator maintenance has been done (fill a comment below).
Comment:
Record
Cancel

Figure 130: Log Operator Maintenance Main Window

- The Author of the log will be shown as "admin."
- Select a subject from the drop-down Subject window. The maintenance technician can create a new subject line by typing in the Subject field (i.e., by typing over a pre-defined subject).

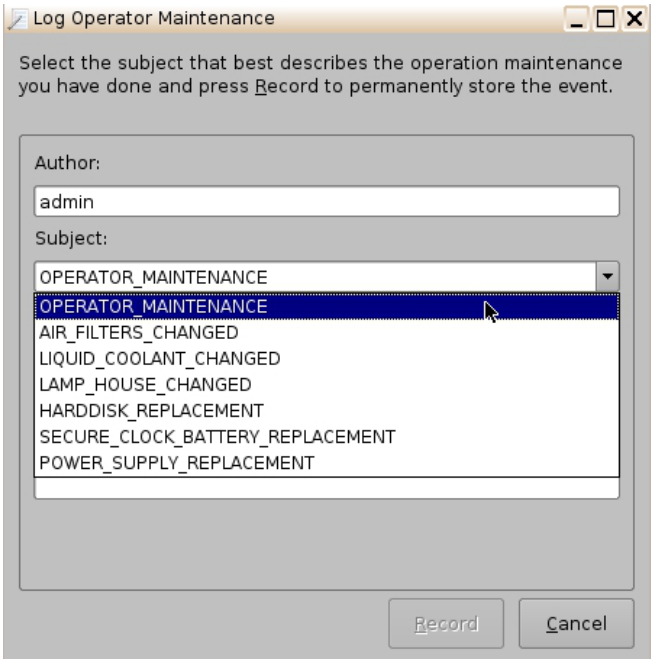


Figure 131: Log Operator Maintenance Main Window

- The following pre-defined subjects include:
  - Operator_Maintenance
  - Air_Filters_Changed
  - Liquid_Coolant_Changed
  - Lamp_House_Changed
  - Harddisk_Replacement
  - Secure_Clock_Battery_Replacement
  - Power_Supply_Replacement
- Add a comment in the Comment field. No restrictions apply for the Comment field, but it is highly recommended that the operator/technician insert comments about the job performed as accurately as possible. This will be used for future references about maintenance. The log will be recorded based on the date and time when the log was entered into the Log Operator Maintenance application.

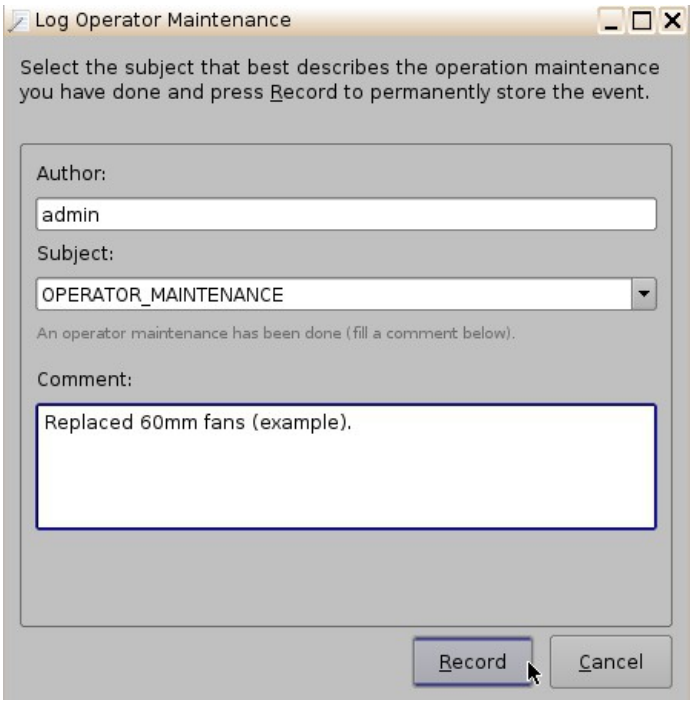

Log Operator Maintenance
Select the subject that best describes the operation maintenance you have done and press Record to permanently store the event.
Author:
admin
Subject:
OPERATOR_MAINTENANCE
An operator maintenance has been done (fill a comment below).
Comment:
Replaced 60mm fans (example).
Record
Cancel

Figure 132: Log Operator Maintenance Entry Example

- Click the Record button.
- The following window will appear (Figure 133). Confirm whether or not to create another log (clicking No will take the user out of the Log Operator Maintenance application).

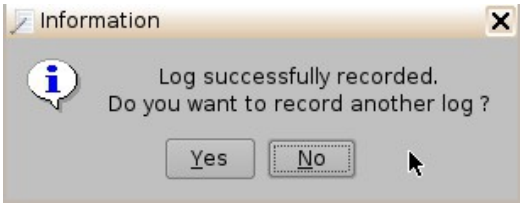


Figure 133: Information Window

- In order to view the logs that were added, go to Menu → Doremi Apps.→ SM Log Viewer. Here the user can search for logs based on class, date, etc.
- Click on the concerned log to view its properties/details.

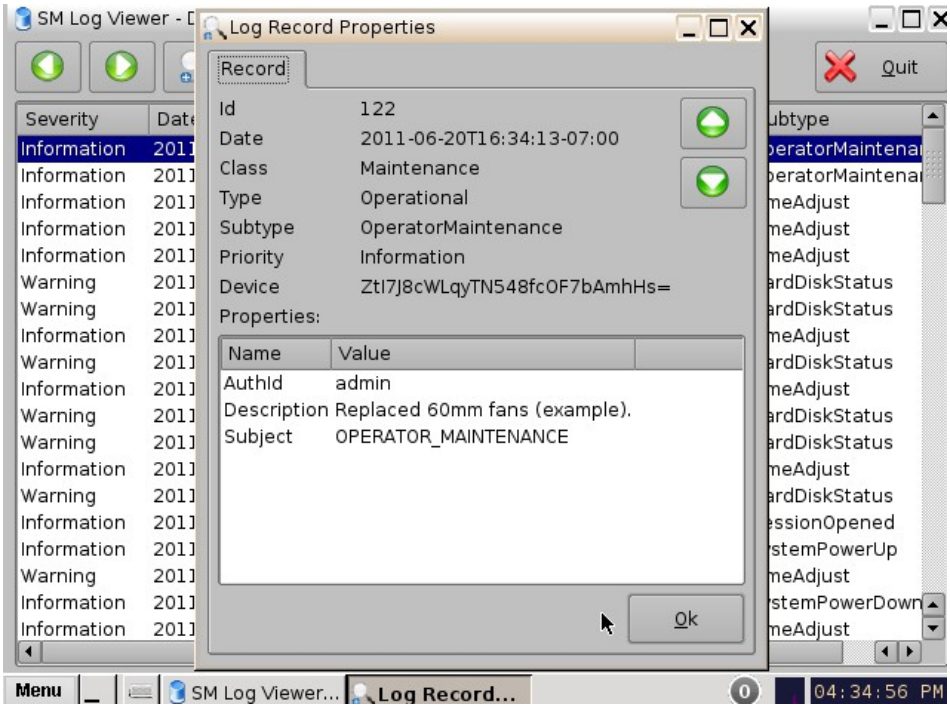


Figure 134: SM Log Viewer Log Retrieved

7.12.1 Exporting System Logs

- To export the log, select the concerned log and click on the Export button (Figure 135).

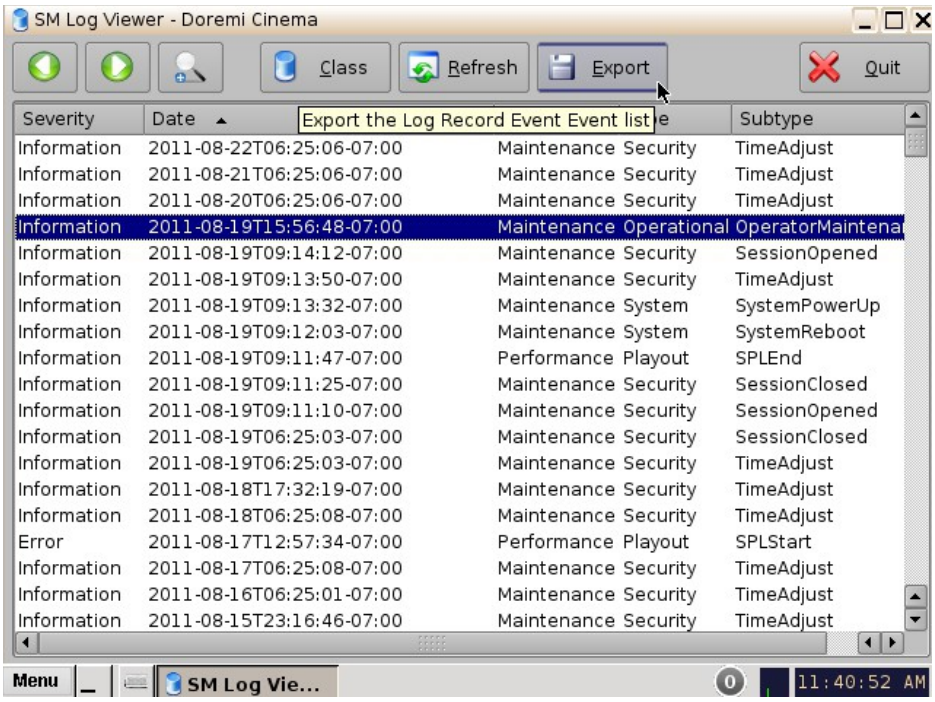


Figure 135: SM Log Viewer Log - Export

- The following window will appear:

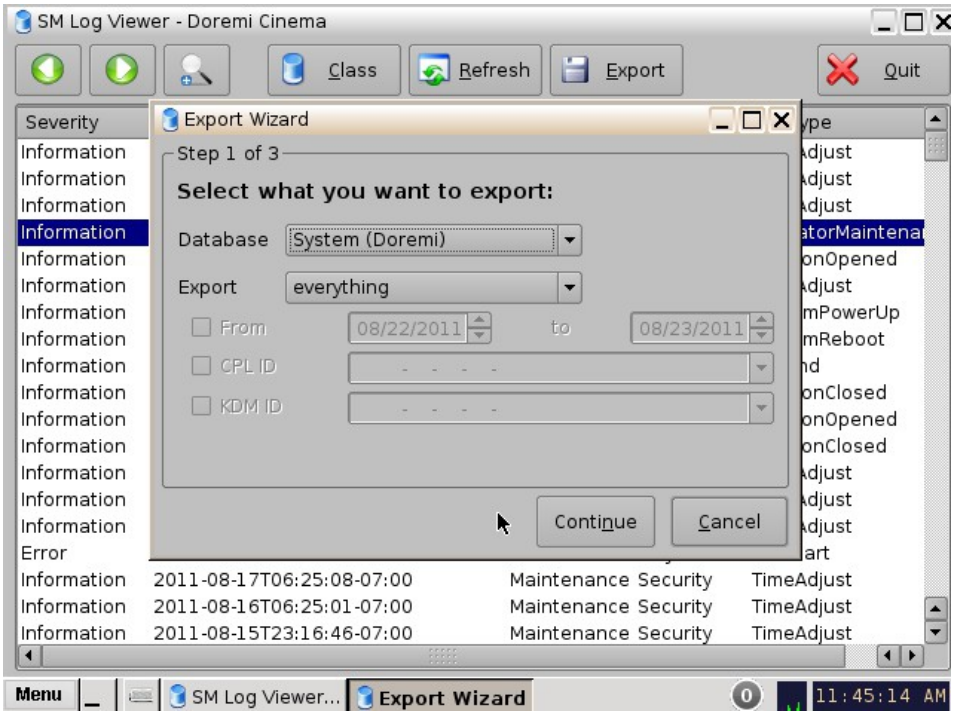


Figure 136: SM Log Viewer Log – Export

- Select the database from which to export the log, either System (Doremi) or Security (SMPTE).
- Select whether or not to export everything, selection, or “asrunlog.” This applies to

System (Doremi) logs (Figure 136).

- Select whether or not to export selection or “asrunlog.” This applies to Security (SMPTE) logs.

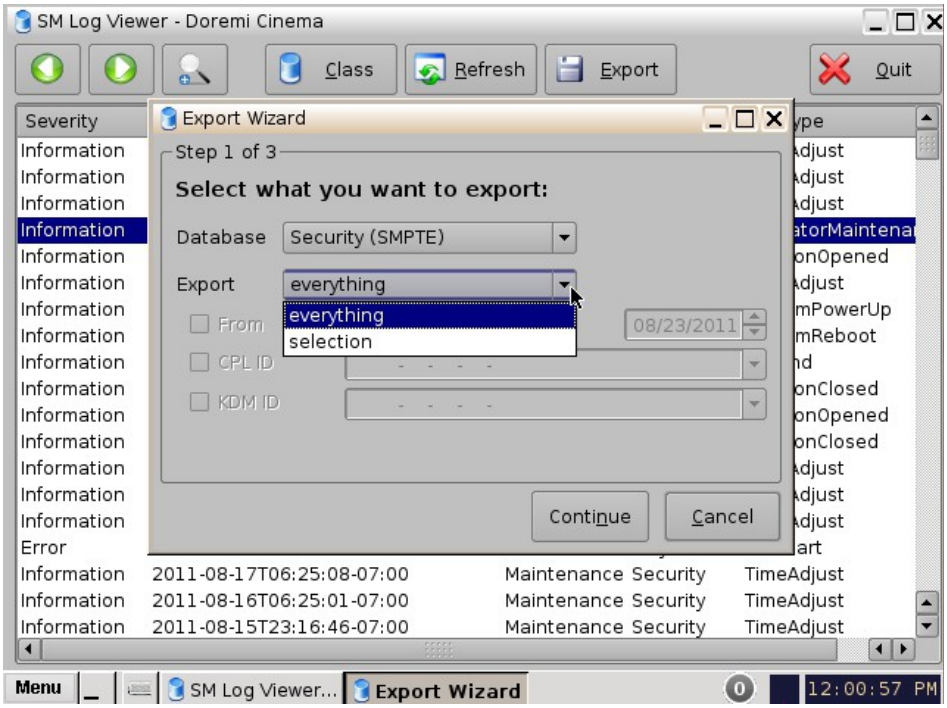


Figure 137: SM Log Viewer Log – Export

- Click the Continue button (Figure 138). The following window will appear:

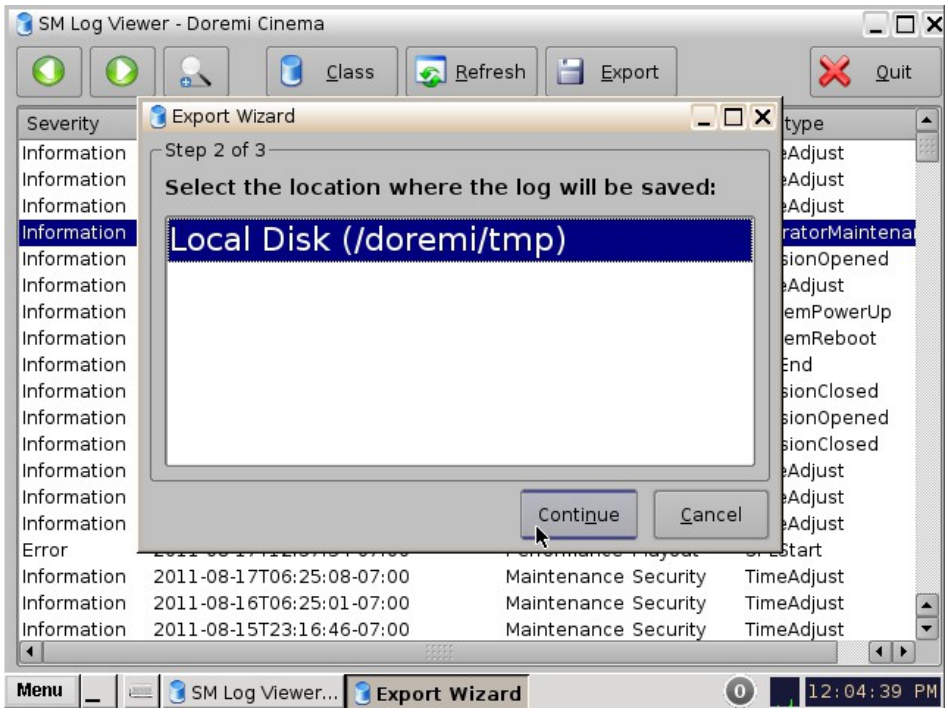


Figure 138: SM Log Viewer Log – Export

- Select the location for where the log will be saved. Then click Continue to proceed (Figure 138).
- The following window will appear: The log will be exported (Figure 139).

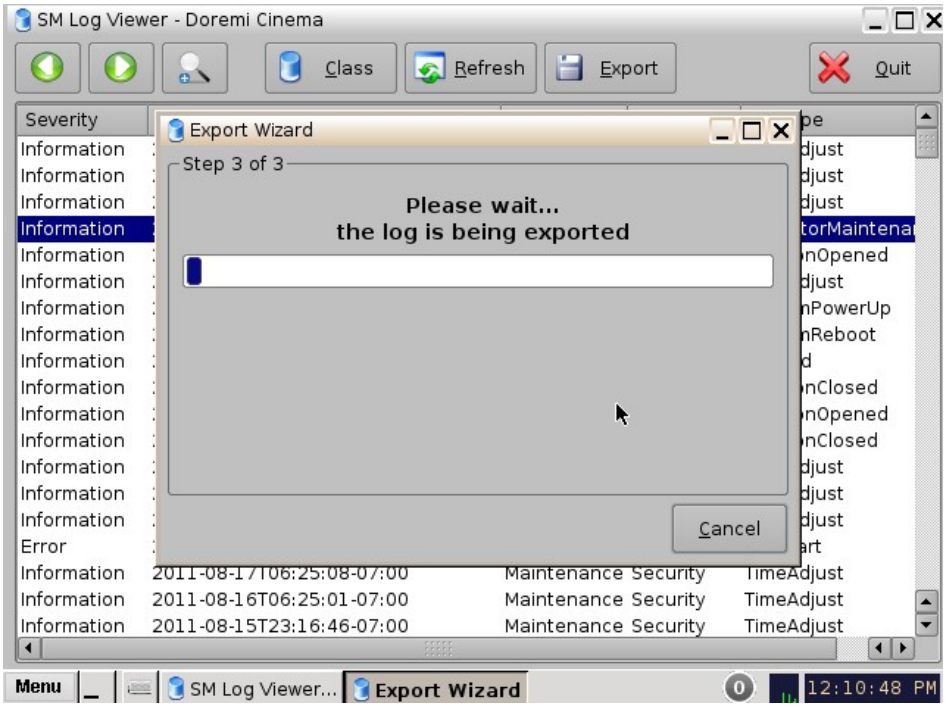


Figure 139: SM Log Viewer Log – Export

- Once the log exportation is complete, the GUI will indicate the process was successful (Figure 140). Click the Close button to exit the pop-up window.

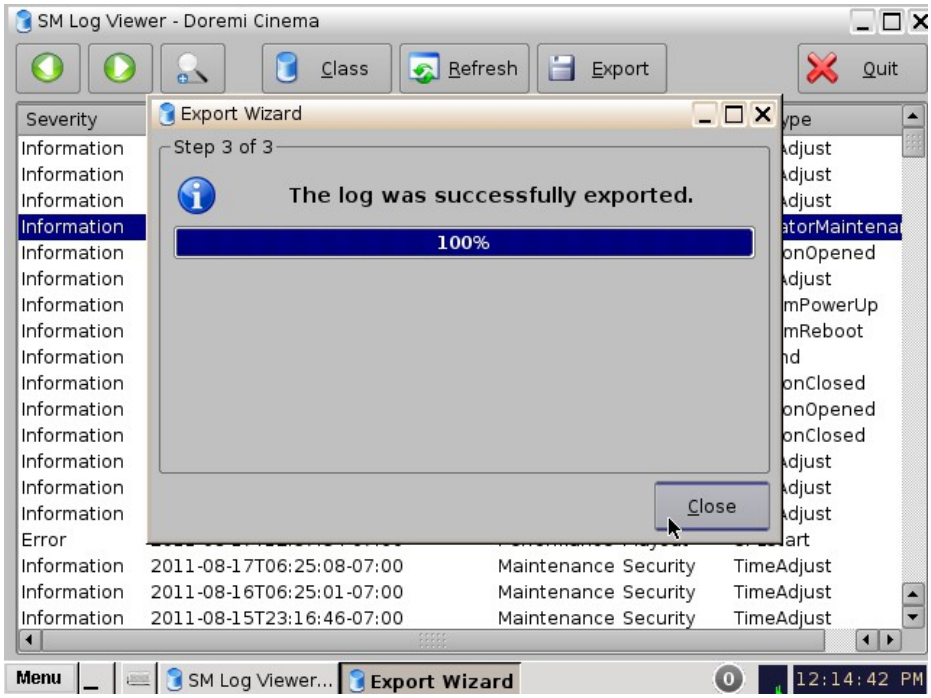


Figure 140: SM Log Viewer Log – Export

7.13 Networking Configuration

- To configure the network, please refer to Section 5.

7.14 Time Setting

- To adjust the time for the unit, follow the procedure below.
- To access the Time Setting GUI, double-click the Time Setting icon in the Control Panel window.
- The user will be asked for a password. Enter the appropriate password to continue (Figure 141).

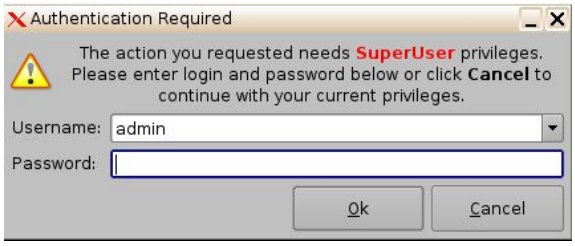


Figure 141: Password Confirmation Window

- The following pop-up window will appear. Adjust the time accordingly and then press the Apply button. The time will now be updated.

Note: Due to DCI requirements, users can only set the time to no more than 30 minutes per calendar year on a Dolphin DCI FIPS 1.0 board. For Dolphin DCI FIPS 1.2 boards, the user can only adjust the RTC (Real Time Clock) time within DCI allowed-time of 6 minutes per calendar year. If the user tries to apply a value outside the remaining time limit, it will not be applied. Network Time Protocol (NTP) should be used to keep the RTC time correct.

Figure 142: Time Setting Pop-Up Window

7.15 TouchScreen Calibration

Note: Verify that the stylus on the server front panel LCD screen functions as a mouse. Check to see if the server LCD screen VGA connector is linked to the motherboard VGA connector.

- Go to Menu → System → Touchscreen Calibration.
- Using the stylus located on the left side of the server LCD screen, press on the four blinking dots, as shown below (there is one dot in each screen corner). See Figure 143 below.
- Make sure to hold the stylus over the blinking dot for more than a second.

Note: The red line on the bottom of the Touchscreen Calibration window indicates how much time the user has left to complete the calibration process. If the calibration process is not complete by the time the red line runs out, the process will stop and the program will exit out of the calibration process (Figure 143).

- Once the blinking dot turns into a cross, move onto the next blinking dot.

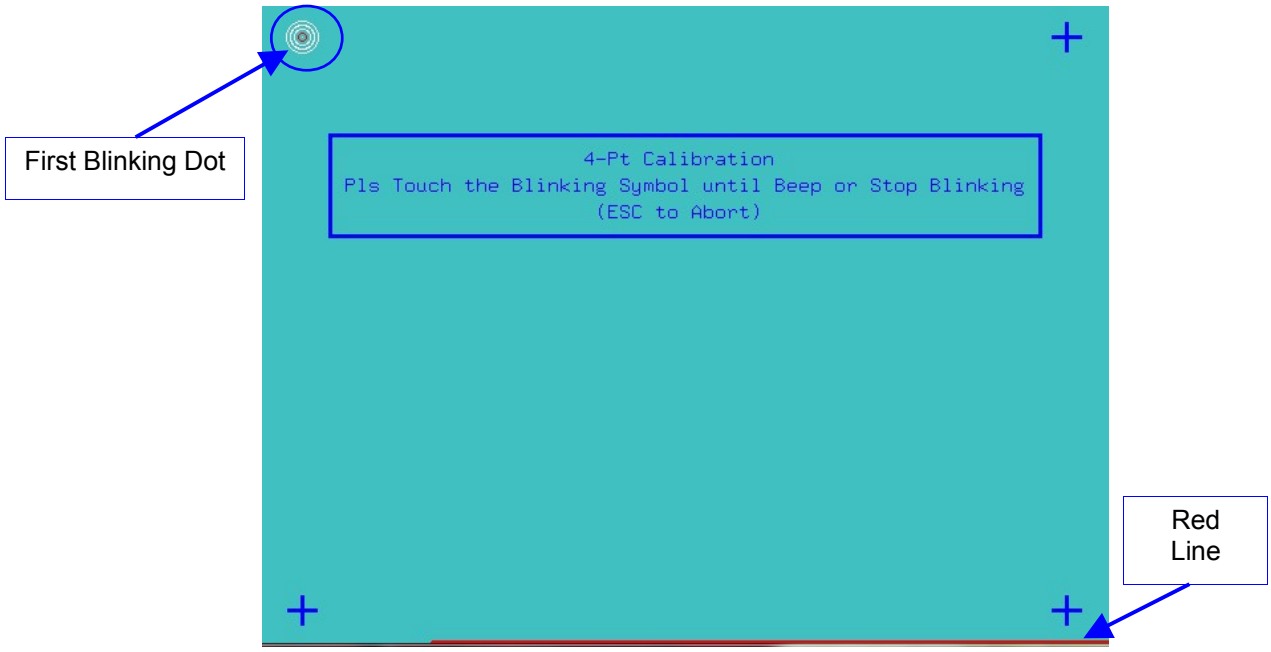


Figure 143: Touchscreen Calibration Window

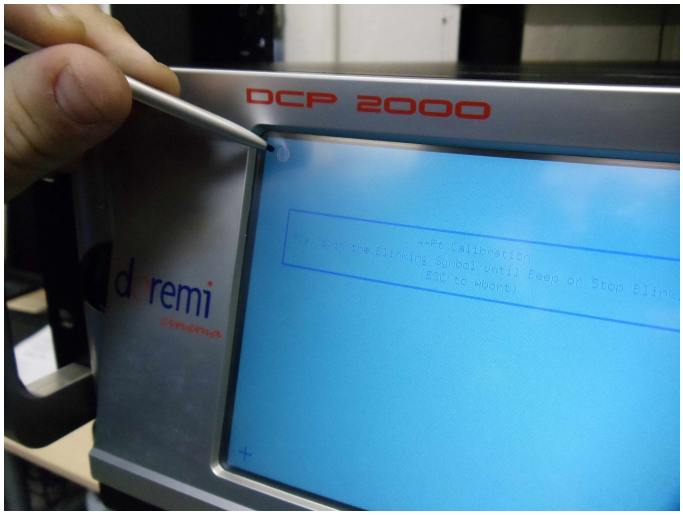


Figure 144: Server LCD Screen Calibration

- To abort without completing the calibration process, press Esc.
- Once the calibration process is complete, the Touchscreen Calibration window will automatically close. This will indicate that the calibration process was successfully completed.

8 Ingest Manager GUI

8.1 Ingesting Content

The Ingest Manager GUI will only show items that can be supported by the DCP-2000 (text, documents, pictures, power-point presentations, etc. will not appear).

Note: Compositions (CPLs), Key Delivery Messages (KDMs), Doremi License Files (DLMs), and Show Playlists (SPLs) can all be ingested through the Ingest Manager GUI.

8.2 Content Types

Different types of content can be displayed in the Ingest Manger GUI window.

- Reel icons represent a Composition Package which contain audio-video content (e.g., features, trailers, etc.). See Figure 145.
- Speaker and Film icons represent individual compositions within a Composition package.
- Film icons represent Show PlayLists (SPLs), which contain the main feature and trailers (Figure 148).
    - Note: When the SPL is ingested, the Ingest Manager GUI will show all of the components that make up the SPL.
- Lock icons represent Key Delivery Messages (KDMs), which contain the required decryption keys allowing playback of the corresponding CPLs.

Figure 145: Reel Icon

Figure 146: Speaker and Film Icon

Figure 147:Lock Icon

Figure 148: Film Icon

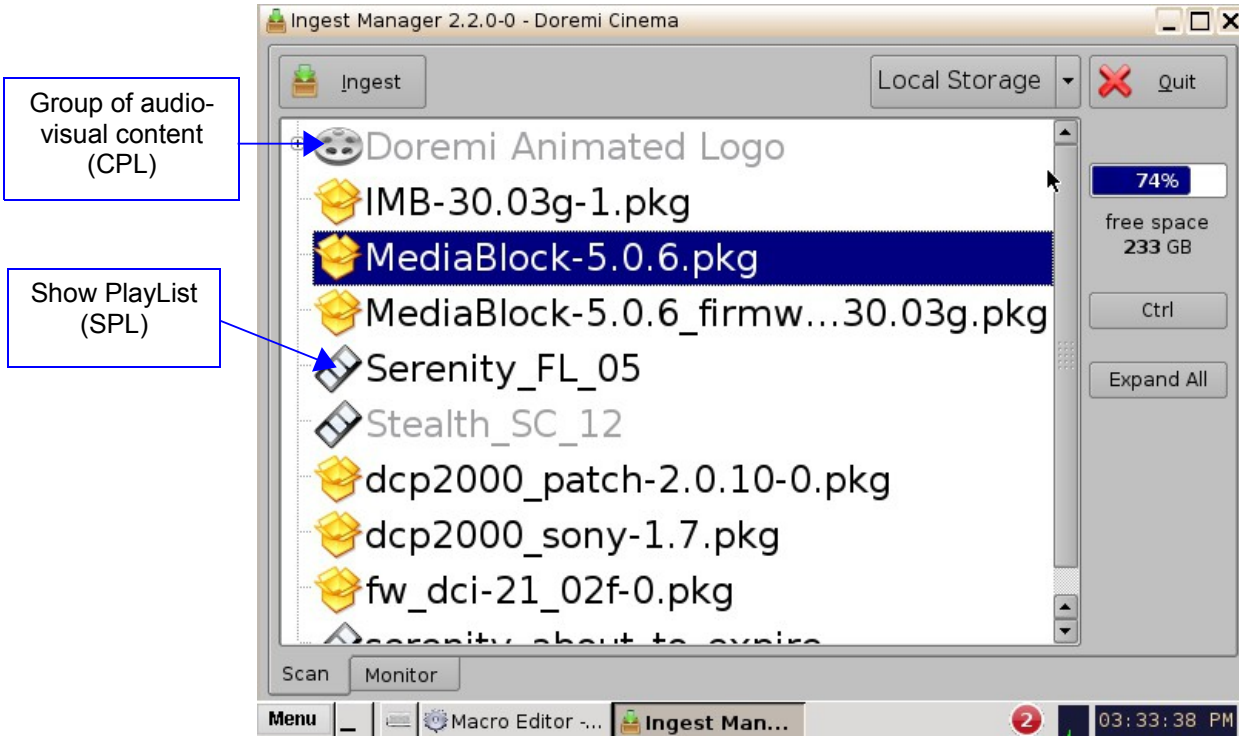


Figure 149: Ingest Manager GUI

8.3 *Ingesting Content*

8.3.1 Ingesting content From a USB Drive

If the content to ingest is on a USB drive, plug the drive into the DCP-2000's USB Port and wait for the Ingest Manager window to appear (Figure 150).

Note: This assumes that the DCP-2000 has been installed according to the "Hard Disk Drive Installation" document that ships with the unit.

- Select an item.
- Click on the Ingest button. The ingest process will begin.
- If an item was already ingested, it will appear in gray as illustrated in Figure 150.
- To see the progress of items being ingested, click on the Monitor tab.
- Select multiple items by clicking the Ctrl button (Figure 150) and then clicking on the Ingest button.

Note: It is possible to playback ingested content while ingesting other content. This is not the same as the Pngest feature (discussed below), which allows for simultaneous ingest and playback of the same content.

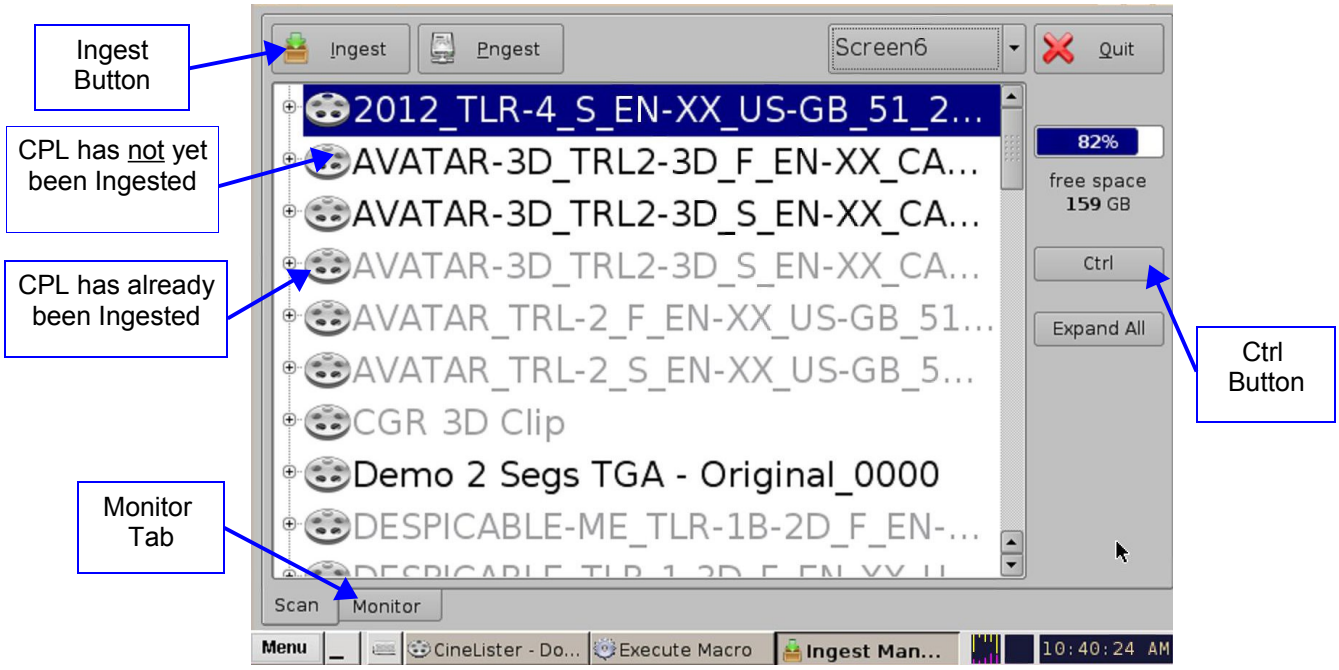


Figure 150: Ingest Manager GUI

8.4 Ingesting Content from a Remote Doremi Server/LMS

8.4.1 File Transfer Protocol (FTP)

Use a File Transfer Protocol (FTP) connection to ingest an item from a central server or a cinema server over a network.

8.4.1.1 Ingesting Content From a Doremi Remote Server/LMS

- Go to Menu and select Doremi Apps., then click on Ingest Manager.
- Click on the drop-down menu from the Local Storage button (Figure 149).
- Select the device from which to ingest from. Its content will be displayed inside the GUI.
- Select the item to ingest and click the Ingest button.

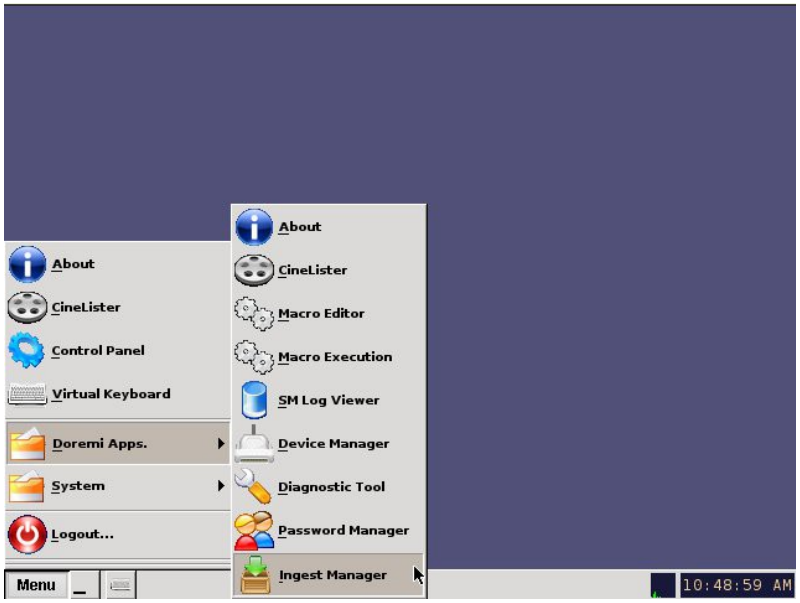


Figure 151: Menu Example

Note: To access the content from a Doremi Remote Server or LMS, use the Local Storage drop-down menu (Figure 149). The server must be added through Content Feed Manager

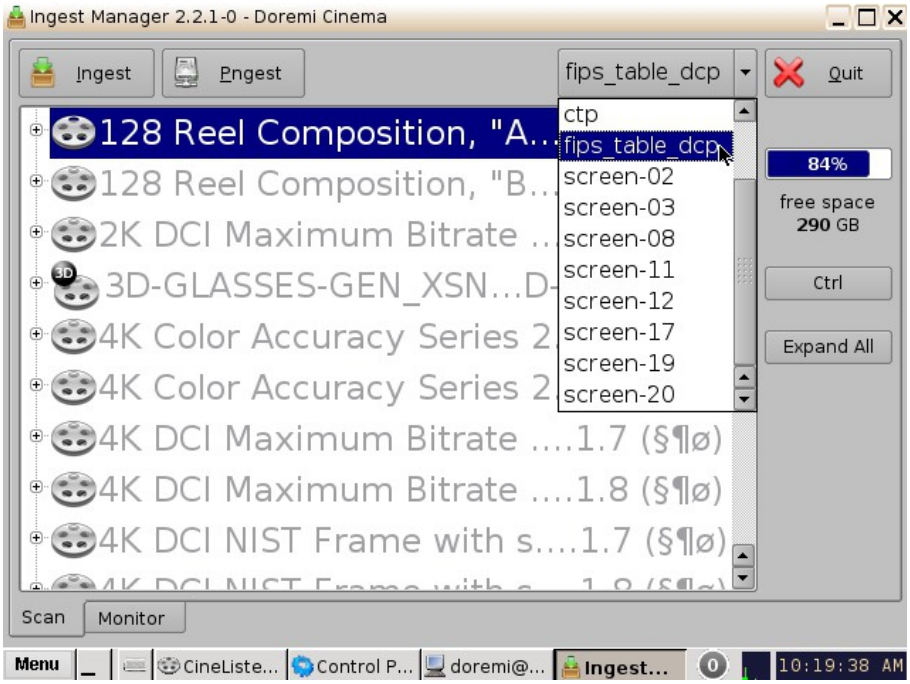


Figure 152: Ingest Manager GUI

8.5 Ingest Progress

The DCP-2000 allows the user to ingest content while the server is ingesting previously selected content. Click on the Monitor tab to see the progress of all the ingested items

- USB ingests are Real Time.
- Sata ingests are two-thirds of Real Time.

8.6 Pngest

The Pngest feature is available when the user is ingesting content over a Doremi remote server or LMS.

Note: The Pgnest feature is available only when ingesting content over a Remote Doremi Server or an LMS, not from a USB or SATA.

When the user is ingesting a Composition, it can be played it while it is being ingested rather than waiting until the ingest is complete to play it. Give the CPL approximately 5-7 minutes to load. The user cannot rewind or fast forward during playback. To rewind, the user will have to start from the beginning. The user will be able to view the CPL at the rate that it is being ingested (i.e., like a streaming video, hence, there is no need to refresh during playback).

8.6.1 How to Pngest a CPL

- If the content is encrypted, the user must first ingest a KDM.
- Click on the CPL to Pngest and click the Pngest button.
- A window confirming the Pngest will appear. Click Yes.
- The user may be prompted to enter a password.
- Monitor the progress of the Pgnest by clicking on the Monitor tab.
- Wait approximately 5-7 minutes until the Pngest is complete.
- Go to CineLister from the server Menu and click on the Refresh button.
- The CPL will appear in the Editor tab.
- To begin playing the CPL, go to the Playback tab from the CineLister GUI and click Play.
- The CineLister application, including the Playback feature, is explained in full detail later in this manual.

Note: For a complete overview of the CineLister GUI and its functions, including the Editor, Playback, and Schedule tabs, see the Section, “Show Management Using CineLister,” below.

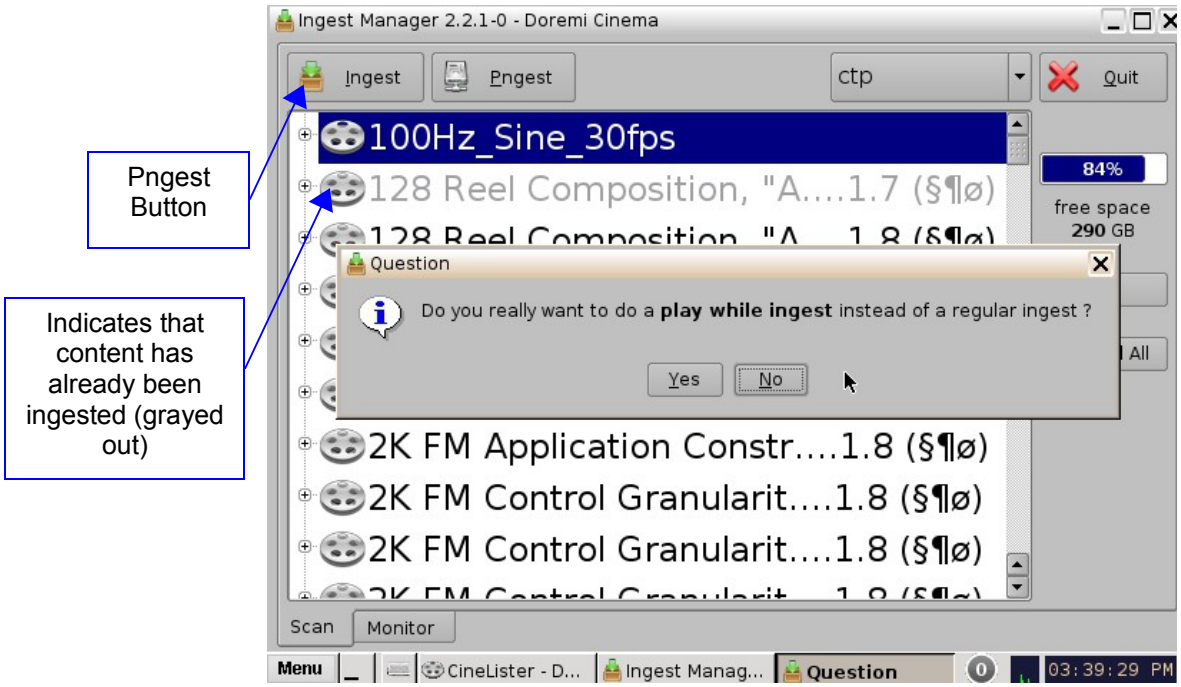


Figure 153: Pgnest Prompt Window

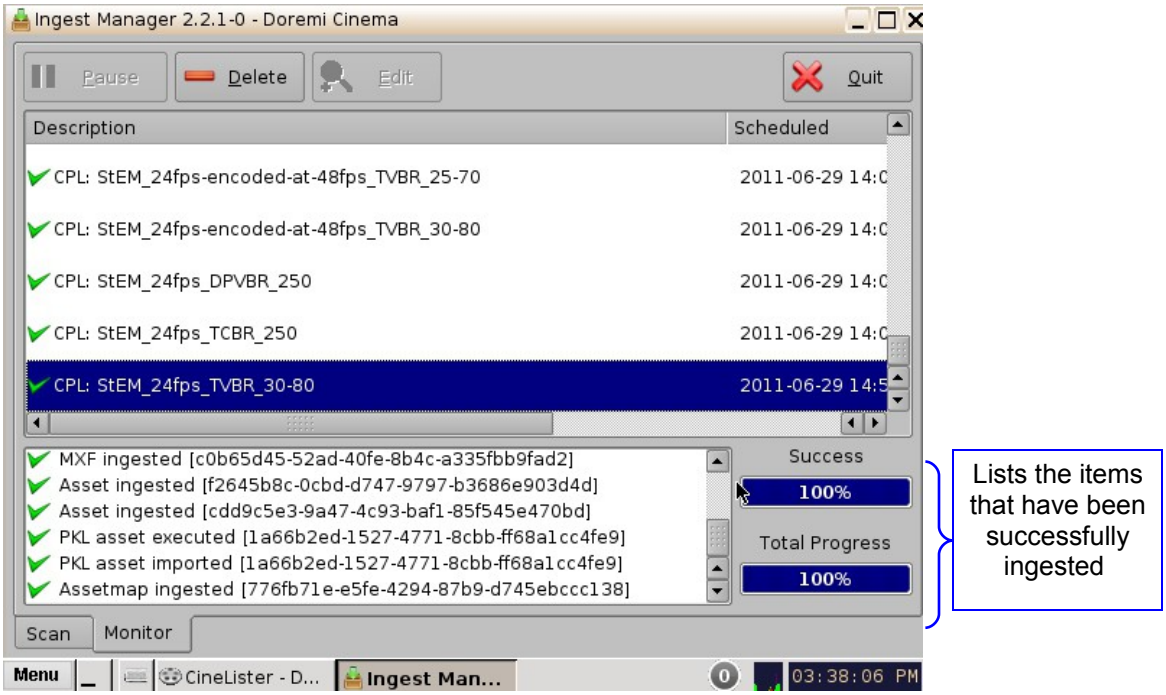


Figure 154: Ingest Manager - Monitor Tab

Note: The Total Progress bar indicates the progress of the CPL Ingest, while the Copying Asset bar indicates the progress of the individual components of the CPL.

9 Show Management Using CineLister

CineLister is an application that manages the DCP-2000 and will automatically appear when the DCP-2000 is connected. CineLister is based on a Graphical User Interface (GUI) that allows the creation, management, editing, and playback of SPLs and other ingested content. CineLister also has the capability to schedule playbacks.

9.1 CineLister Editor Tab

- To Access the CineLister GUI, click the Menu button or right-click on the server desktop (Figure 155).
- Scroll and click on the CineLister option.
- The user will be prompted to CineLister's Editor tab. The Editor tab is the default tab that CineLister displays every time the application is opened (Figure 156).

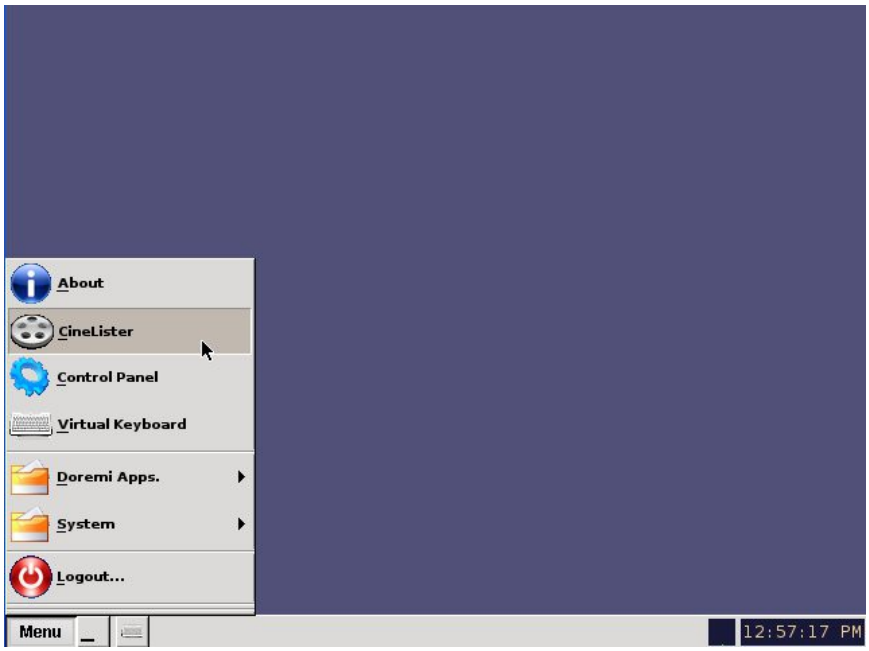


Figure 155: Menu Example

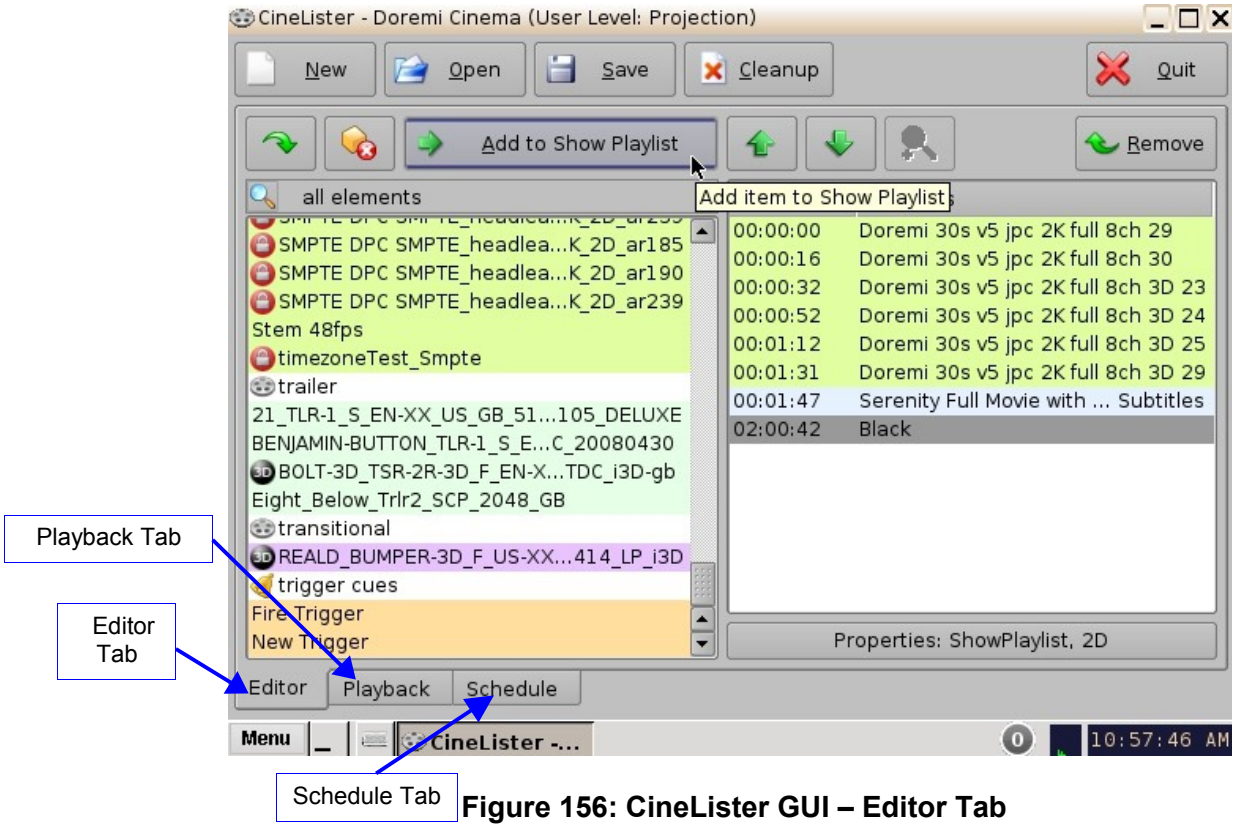


Figure 156: CineLister GUI – Editor Tab

- The Editor tab is composed of two different parts:
  - The left pane displays all of the content (e.g., features, trailers, advertisements) and Automation and Trigger Cues.
  - The right pane is used to display the content of a given Show Playlist.

10 Show Playlists

A Show Playlist (SPL) is a succession of Compositions (CPLs), Automation Cues, and Trigger Cues. Show Playlists make up the chain of events that account for the playback of a show. Using CineLister, the user can create and edit SPLs.

- Types of elements that can be used when creating an SPL:
  - Audio-visual content (e.g., features, test content, trailers, live, etc.)
  - Automation cues (Macro automation events)
  - Trigger cues (events upon which a Macro Automation Cue is executed)

10.1 Audio-Visual Content

- When the audio-visual content is encrypted, an icon is displayed with the content.
  - Lock icon with red minus sign: The required KDM is not available. Thus, the content cannot be played (Figure 157).
  - Lock icon with green plus sign: A valid KDM is available for that content and that content can be played (Figure 157).
  - Timer icon with orange caution sign: The required KDM is present and will expire in less than 48 hours. The user is warned that they will not be able to play the content anymore after expiration of the KDM (Figure 157).

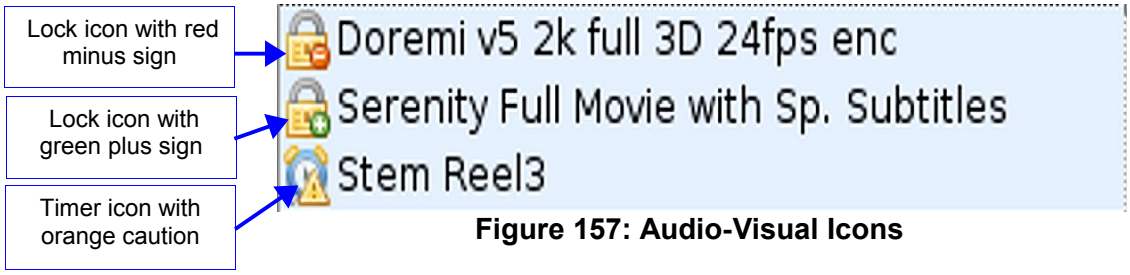

Lock icon with red minus sign
Lock icon with green plus sign
Timer icon with orange caution
Doremi v5 2k full 3D 24fps enc
Serenity Full Movie with Sp. Subtitles
Stem Reel3

Figure 157: Audio-Visual Icons

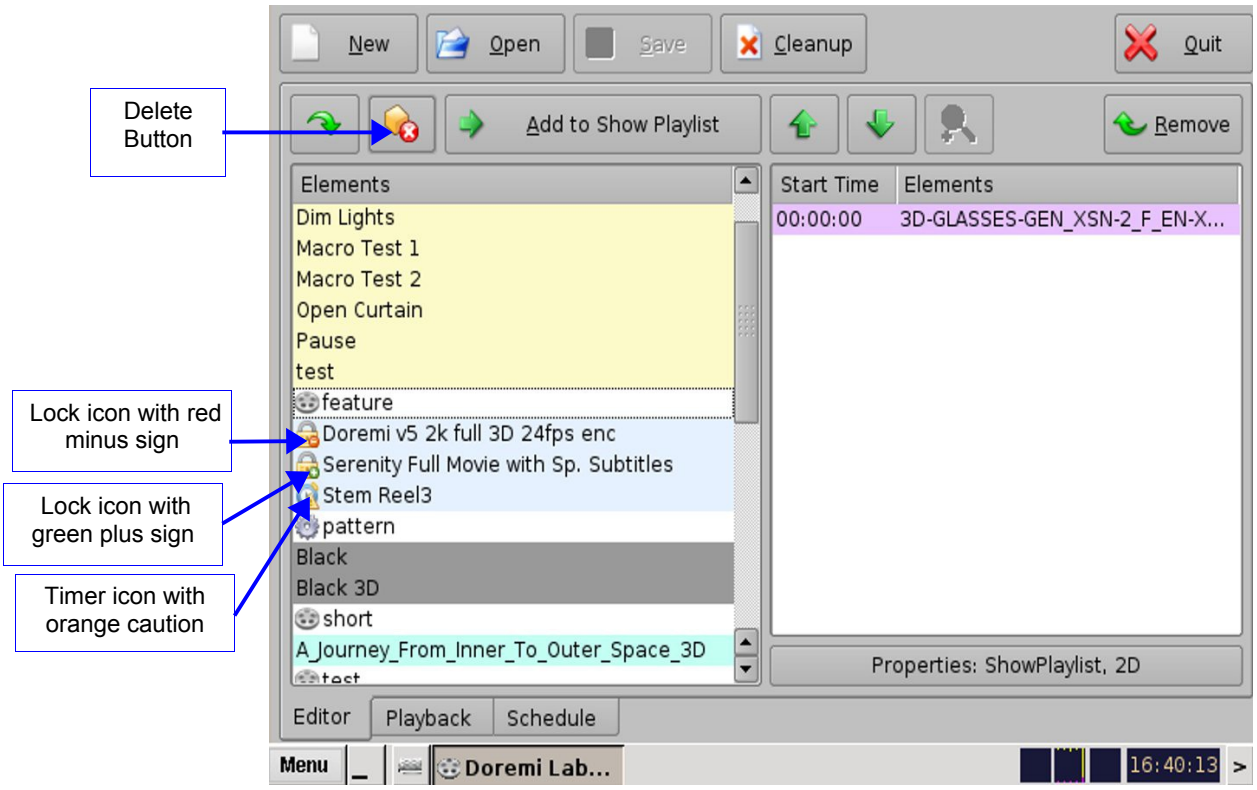


Figure 158: CineLister Editor Tab GUI - Audio/Video Icons

10.2 Show Playlist Creation

CineLister allows the user to create their own Show Playlist from the elements listed in the left pane of the Editor tab.

10.2.1 How to Create a New Show Playlist

- Click on the New button from the CineLister Editor tab (Figure 159).
- Click on the elements to add to the SPL from the left pane of the GUI. Use the Ctrl (PC) or Command (Mac) button to select more than one element at a time.
- Click on the Add to Show Playlist button (Figure 159). The element(s) will appear in the right pane.
- To remove an element in a Show Playlist, select it in the Show Playlist window and click the Remove button (Figure 159).
- Click on the Save button. The user will be prompted to a window asking them to name the newly created SPL (Figure 160).
- To save the Show Playlist on a USB, see the Section, “Export SPL to USB,” below.

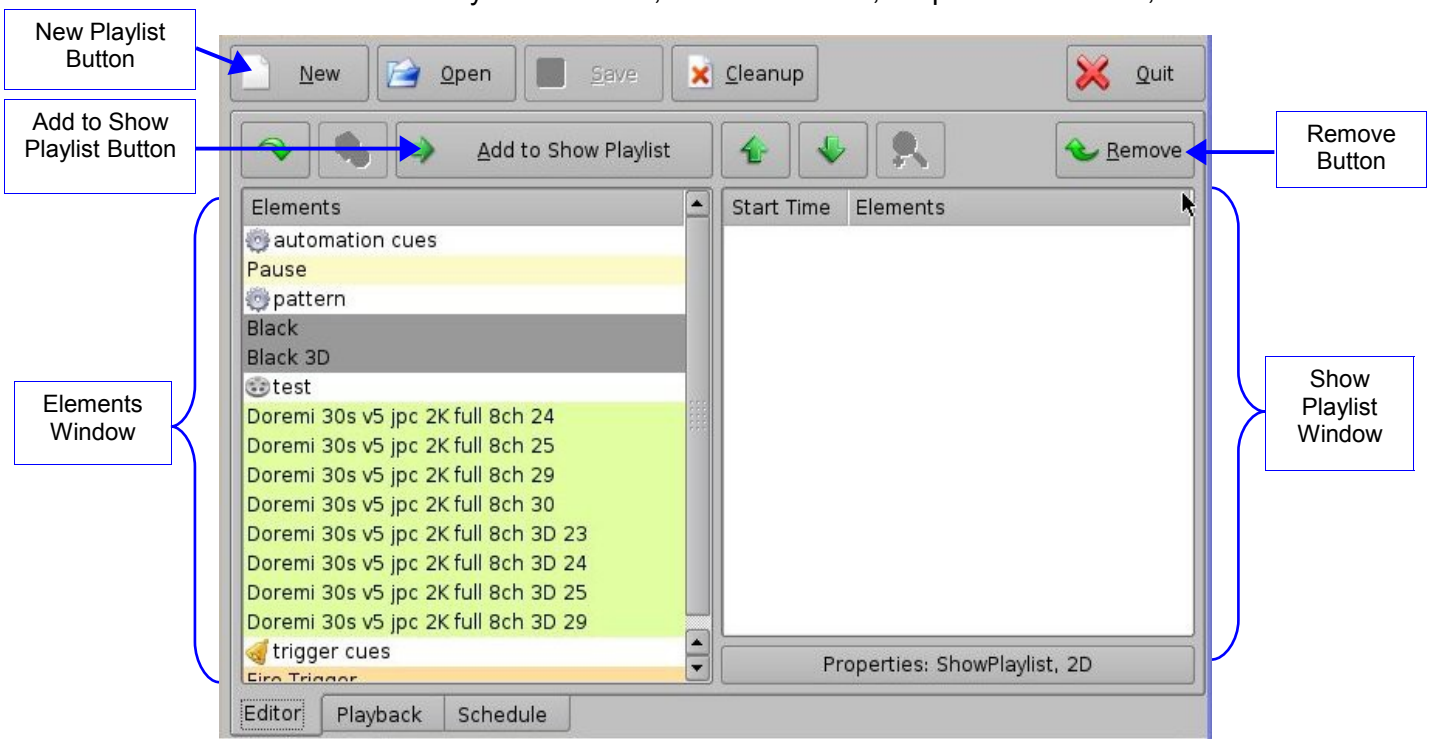


Figure 159: CineLister GUI – Editor Tab

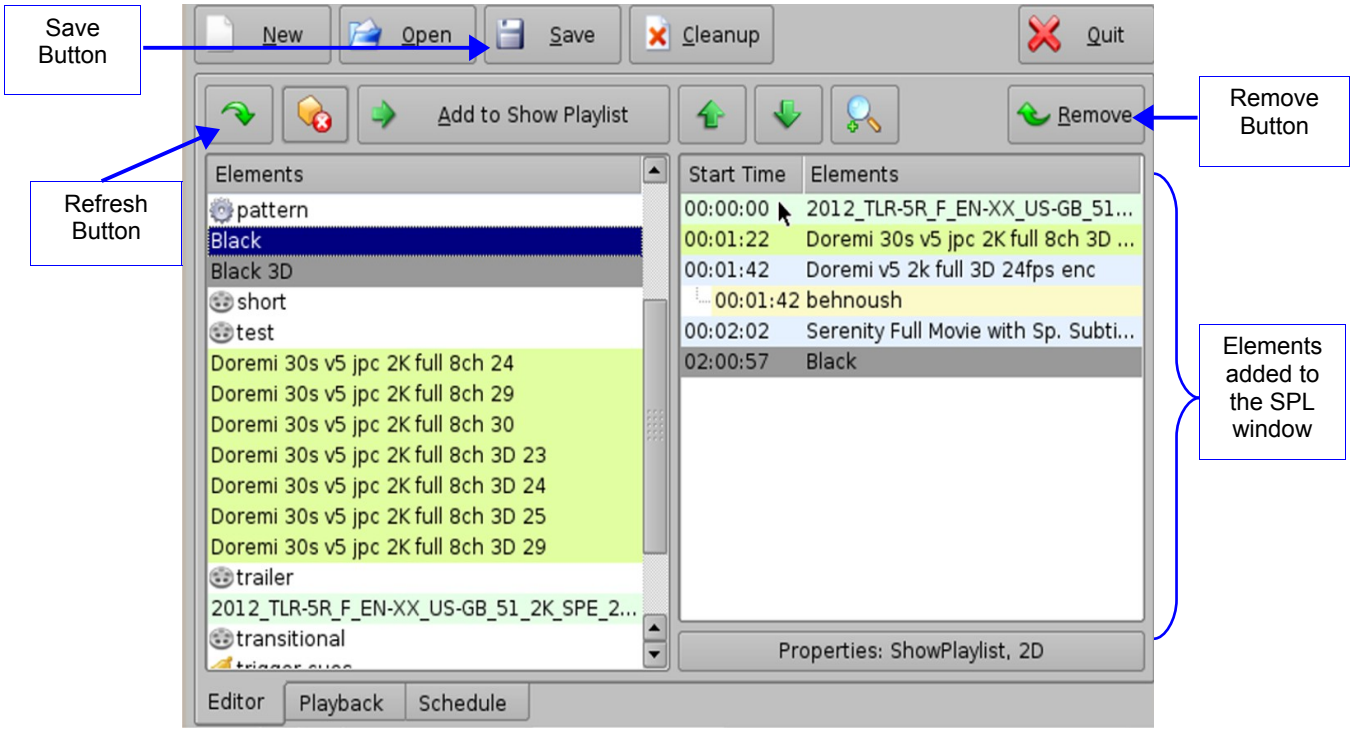


Figure 160: CineLister GUI – Editor Tab

10.2.2 Element Re-Ordering

Using the up and down arrows, each element can be moved to the top or to the bottom of the Show Playlist:

- To move an element to the top of the Show Playlist, select it and click on the arrow pointing to the top (Figure 160).
- To move an element to the bottom, select it and click on the arrow pointing to the bottom (Figure 160).

Note: When an element is associated with an automation or trigger cue, the cues will also be re-ordered.

Arrow Pointing to the Top

Arrow Pointing to the Bottom

Figure 161: Arrows

10.2.2.1 Refresh Button

Anytime new content and a package is ingested into the server, the items will not be displayed automatically in the CineLister GUI if CineLister is already running. Click on the Refresh button from the Editor tab (Figure 160) to see an updated version of all available items that have been ingested.

10.2.2.2 Save Button

It is very important to click the Save button when done completing any task to save, especially an SPL. If the user does not click the Save button, the changes will not be reflected.

10.3 Export Show Playlist

The user can save and export a Show Playlist to a USB drive or other drive that the server supports.

10.3.1 How to Save and Export a Show Playlist

- Go to the CineLister Editor tab (Figure 160). The user can either open an existing SPL or create a new SPL to export.
- For an existing SPL, make modifications and then click Save.

Note: It is only possible to save and export an existing SPL if modifications have been made to it.

- For a new SPL, click the Save button.
- The user will be promoted to the SPL Saving Window (Figure 162).
- Click the Export button. The user will be prompted to the Browse Filepath window (Figure 161).
- Look in the appropriate location to locate the USB drive, and click Save (Figure 161).

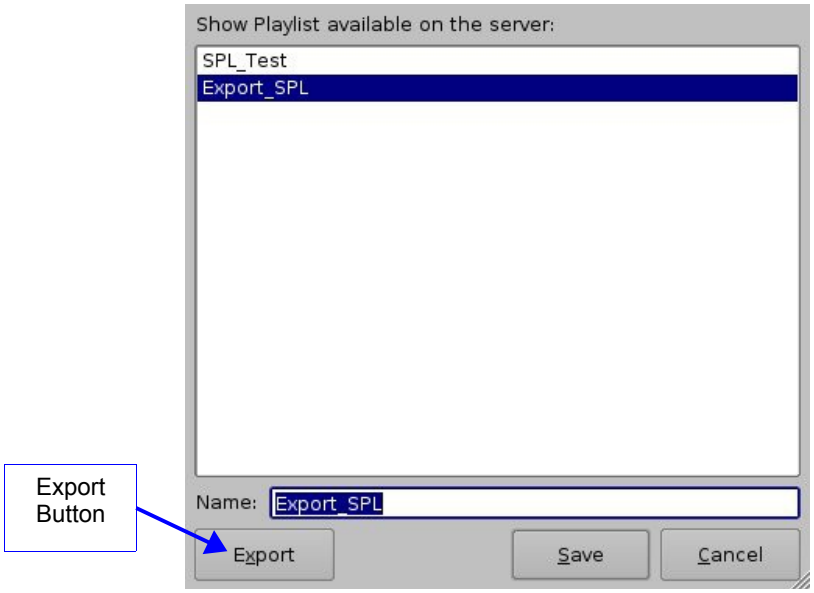


Figure 162: Saving Show Playlist Window

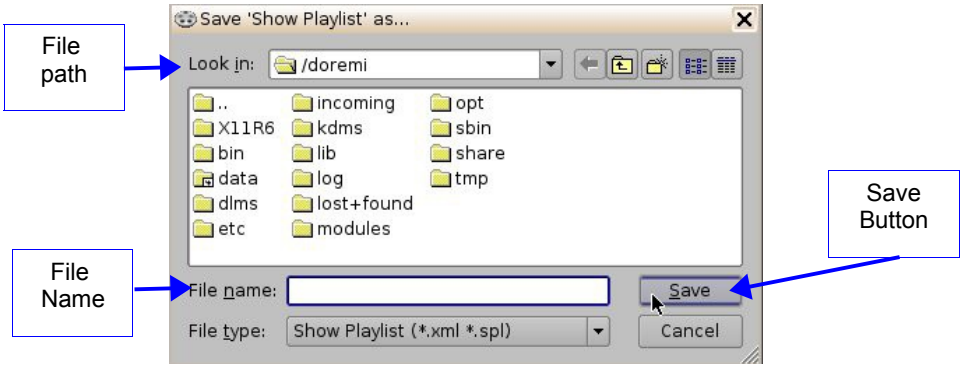


Figure 163: Browse Window

10.4 Importing a Show Playlist

The user can import a Show Playlist from a USB drive or any other drive that the server supports.

10.4.1 How to Import an SPL

- Go to the CineLister Editor tab (Figure 160) and click the Open button.
- A window will appear with SPLs to import (Figure 164).
- Click the Import button. The Browse Filepath window will appear (Figure 165).
- Choose the file path to import the SPL from and click Open.

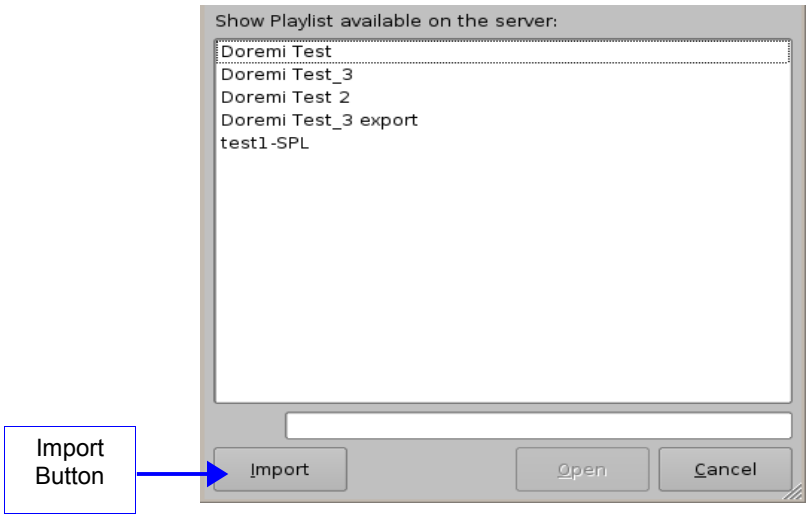


Figure 164: SPLs Available on Server Window

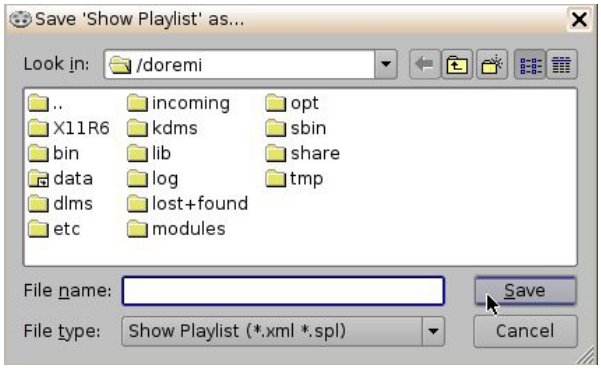


Figure 165: Browse Filepath Window

11 Accessing a Show Playlist

- To open an existing Show Playlist, click on the Open button from the CineLister Editor tab (Figure 166). A new window will appear allowing the user to select the desired CPL.
- Click the Open button (Figure 167). The Show Playlist will be displayed on the right side of the GUI.

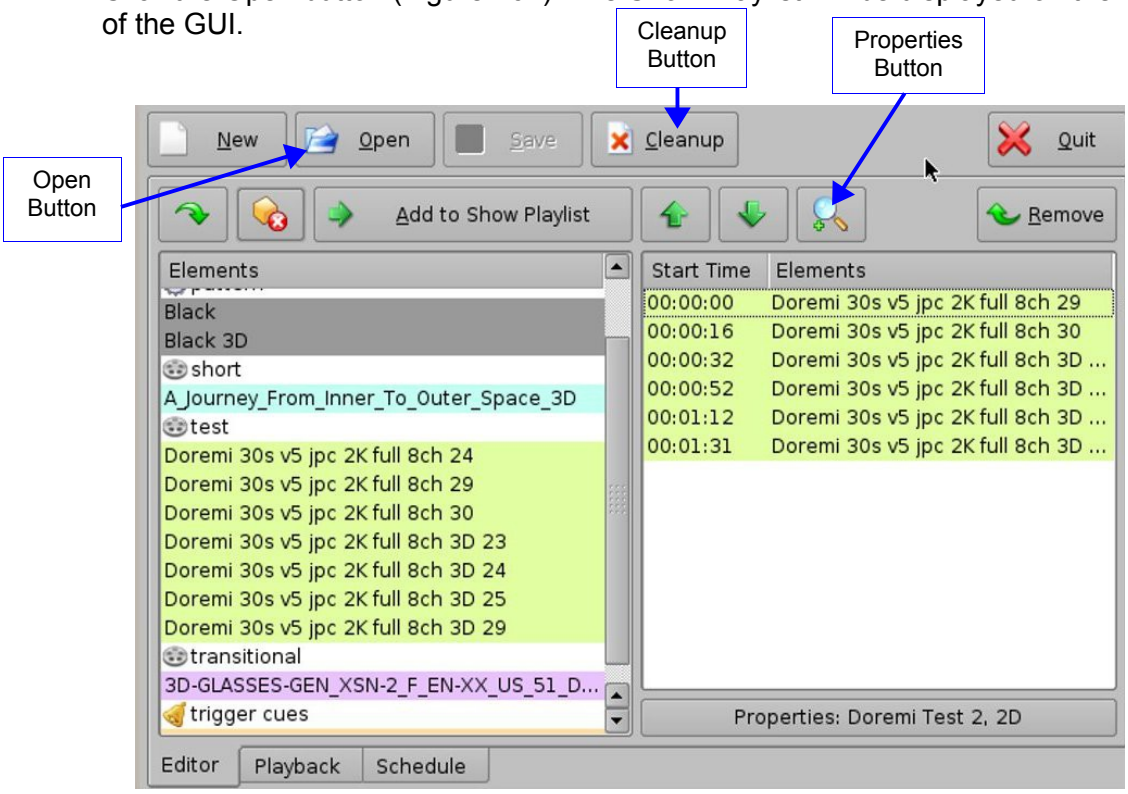

Cleanup Button
Properties Button
Open Button
New
Open
Save
Cleanup
Quit
Add to Show Playlist
Remove
Elements
Start Time
Elements
Black
Black 3D
short
A_Journey_From_Inner_To_Outer_Space_3D
test
Doremi 30s v5 jpc 2K full 8ch 24
Doremi 30s v5 jpc 2K full 8ch 29
Doremi 30s v5 jpc 2K full 8ch 30
Doremi 30s v5 jpc 2K full 8ch 3D 23
Doremi 30s v5 jpc 2K full 8ch 3D 24
Doremi 30s v5 jpc 2K full 8ch 3D 25
Doremi 30s v5 jpc 2K full 8ch 3D 29
transitional
3D-GLASSES-GEN_XSN-2_F_EN-XX_US_51_D...
trigger cues
00:00:00 Doremi 30s v5 jpc 2K full 8ch 29
00:00:16 Doremi 30s v5 jpc 2K full 8ch 30
00:00:32 Doremi 30s v5 jpc 2K full 8ch 3D ...
00:00:52 Doremi 30s v5 jpc 2K full 8ch 3D ...
00:01:12 Doremi 30s v5 jpc 2K full 8ch 3D ...
00:01:31 Doremi 30s v5 jpc 2K full 8ch 3D ...
Properties: Doremi Test 2, 2D
Editor
Playback
Schedule

Figure 166: CineLister GUI – Editor Tab

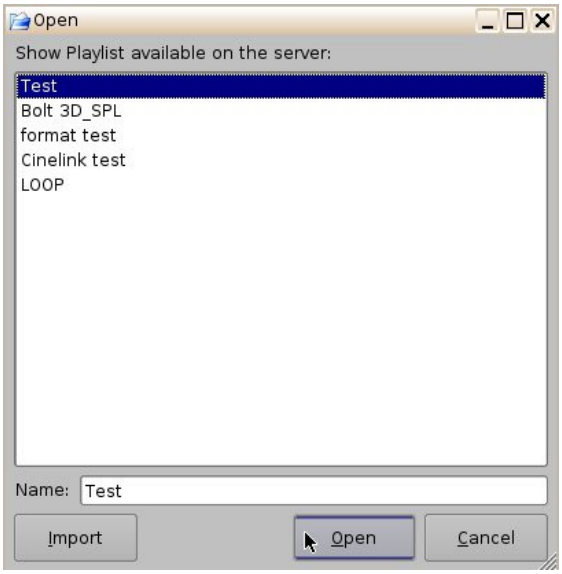


Figure 167: Open CPL Window

11.1 Editing an Existing Show Playlist

- Click on the Open button in the CineLister Editor tab (Figure 166).
- The user will be prompted to the SPLs Available on Server window (Figure 167).
- Select the SPL and click Open.
- The SPLs content will be displayed on the right side of the GUI (Figure 166).
- Re-order the elements within the SPL by using the up and down arrows.
- Remove elements by selecting them and then clicking the remove button.
- To edit the settings of an Automation or Trigger cue, double-click on it.
- To view the properties of a particular CPL, double-click on the CPL or select it and click on the Properties button (Figure 166).

11.2 Deleting a Show Playlist

- Open the desired SPL.
- Once the SPL is opened, delete it by clicking on the Cleanup button.
- A password will be needed to complete this operation.
- The Delete window will appear (Figure 168).
- Select the SPL to delete and click Delete.

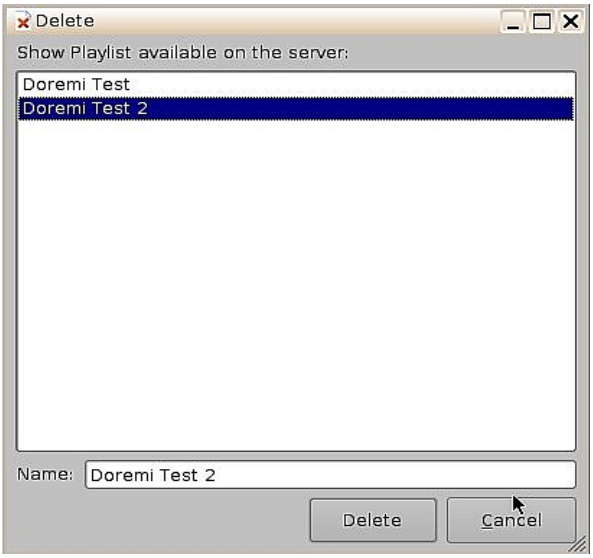


Figure 168: Delete SPL Window

12 Element Properties

- To view the properties of any element in a Show Playlist, select the element from the right side of the GUI. Either double-click on the selected item or click on the Properties button (Figure 169).
- The Composition Playlist Properties window will appear (Figure 170).

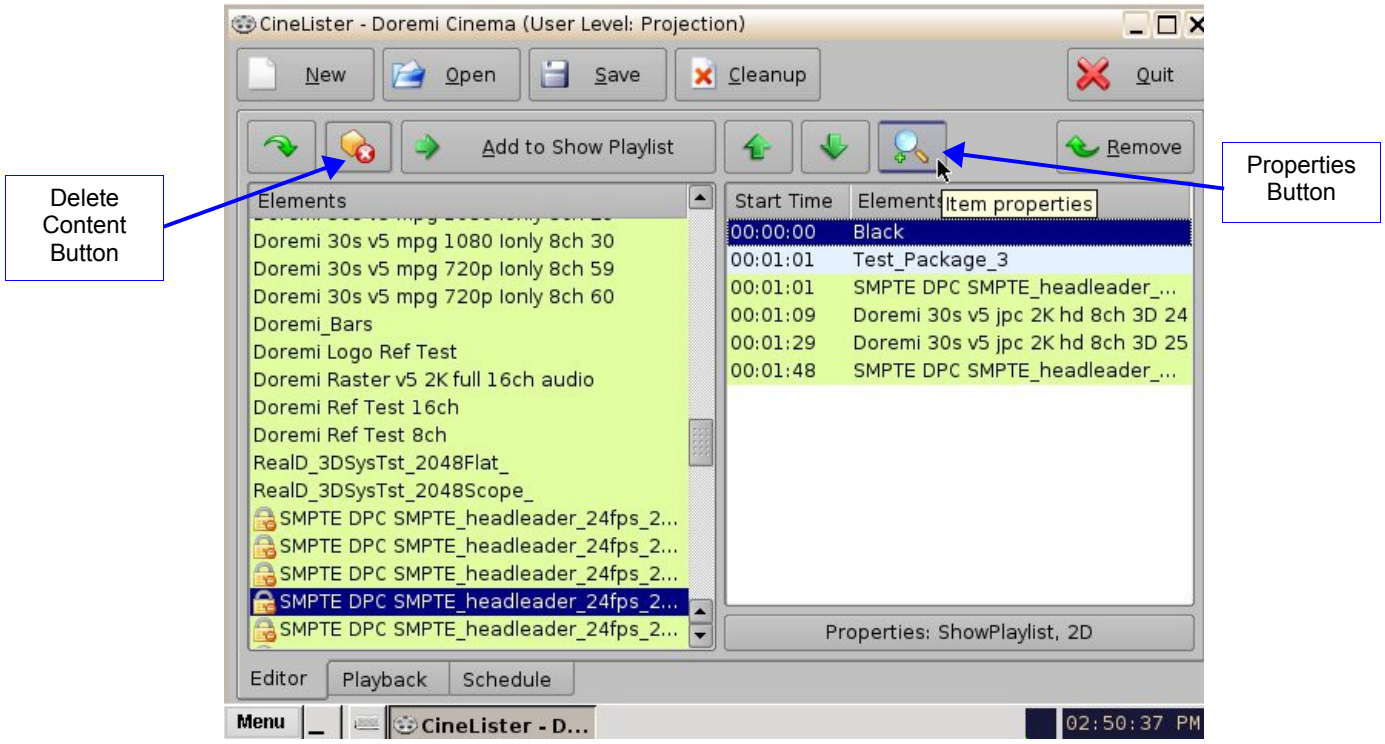


Figure 169: CineLister GUI – Editor Tab

12.1 Unencrypted CPLs

If the element selected is an unencrypted CPL, the following properties window will appear:

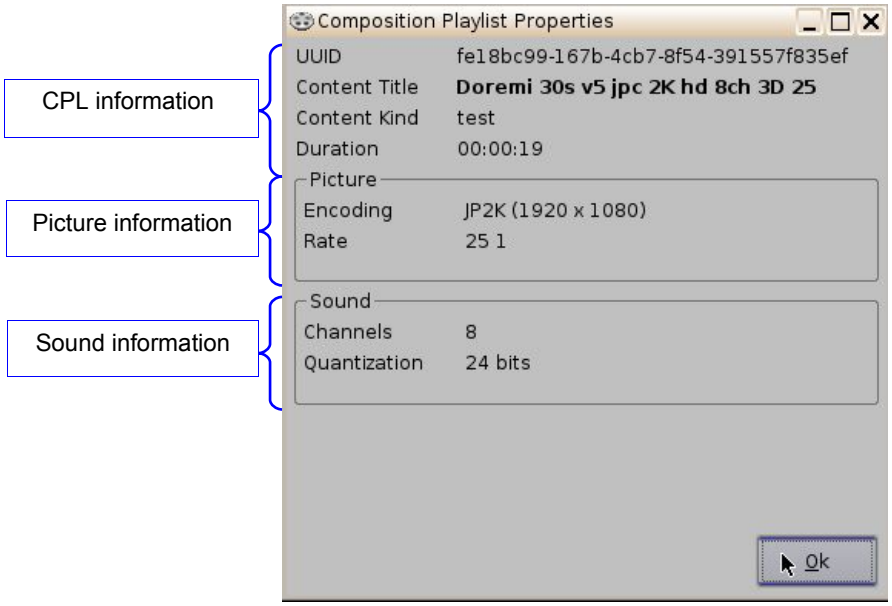


Figure 170: Composition Playlist Properties Window

12.2 Encrypted CPL with KDM Valid (more than 48 Hours)

If the element selected is an encrypted CPL, the following Properties window will appear with the KDM information. If the text in the KDM information screen is green, then the KDM is still available and is valid for more than 48 hours.

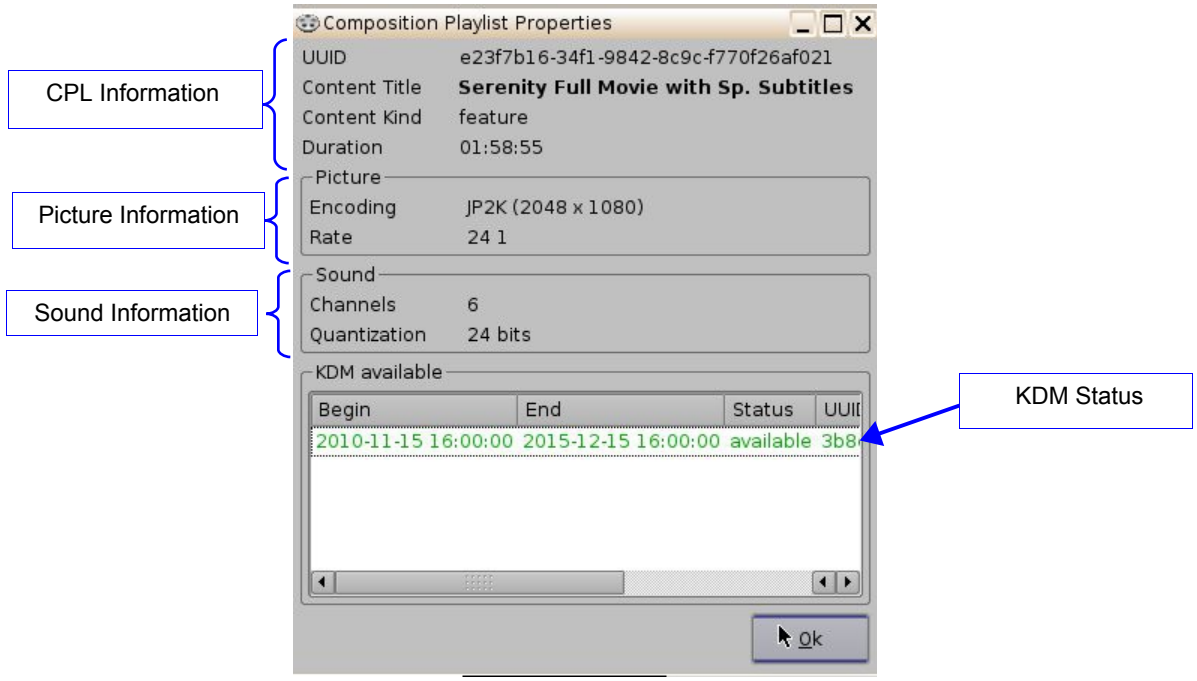


Figure 171: Composition Playlist Properties Window with Encrypted Content

12.3 Encrypted CPL with KDM Valid (less than 48 Hours)

If the element selected is encrypted and the KDM is available, but will expire in less than 48 hours, the text in the KDM information screen will be orange and the remaining time will be displayed.

Note: All KDMs will automatically be removed from the server upon expiration.

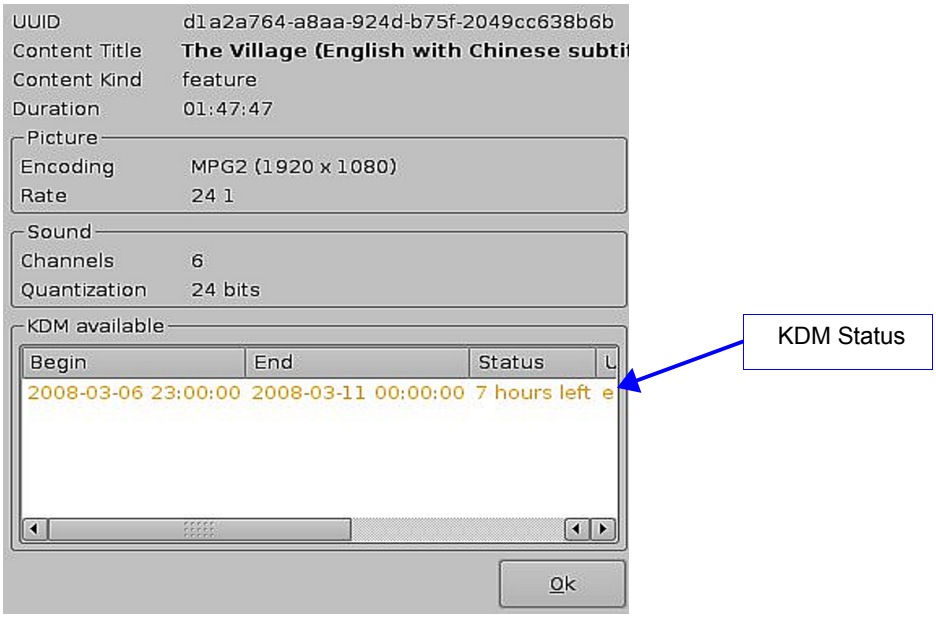


Figure 172: KDM Valid for Less Than 48 Hours

12.4 Deleting a CPL From the Server

- Select the CPL on the left part of the Editor tab GUI and click on the Delete Content button (Figure 169).

Note: The Delete Content button will activate only when an item is selected to be deleted.

- Check the box located at the bottom left corner of the window to delete all KDMs related to the selected Composition (Figure 173).
- Click the Delete button to perform the deletion.
- For security purposes, a password will be needed to complete this operation.

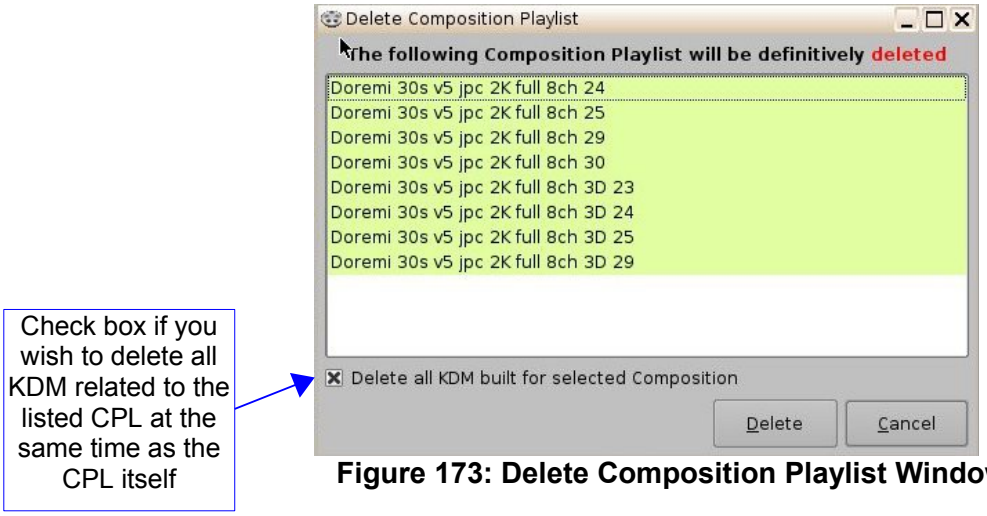

Delete Composition Playlist
The following Composition Playlist will be definitively deleted
Doremi 30s v5 jpc 2K full 8ch 24
Doremi 30s v5 jpc 2K full 8ch 25
Doremi 30s v5 jpc 2K full 8ch 29
Doremi 30s v5 jpc 2K full 8ch 30
Doremi 30s v5 jpc 2K full 8ch 3D 23
Doremi 30s v5 jpc 2K full 8ch 3D 24
Doremi 30s v5 jpc 2K full 8ch 3D 25
Doremi 30s v5 jpc 2K full 8ch 3D 29
Delete all KDM built for selected Composition
Delete
Cancel
Check box if you wish to delete all KDM related to the listed CPL at the same time as the CPL itself

Figure 173: Delete Composition Playlist Window

13 Play 2D Content in 3D Mode

13.1 3D Mode Configuration

The user can play 2D content within 3D Shows without having to generate a stereoscopic version of the 2D content. Changing the mode of the SPL to 3D does not automatically make the content 3D. The content must be in 3D/48fps format to create a 3D SPL.

13.1.1 How to Set the Show Playlist Mode to 3D

- Click the Show Playlist Properties button (Figure 174).
- Select the 3D mode from the Display Mode drop-down window (Figure 175).
- Click the Close button.
- The Show Playlist Properties button will reflect the name of the SPL and what mode it is set to (Figure 176).

Note: In 3D or 48fps mode, the DCP-2000 video output is in the YCxCz color space. The projector itself needs to be properly configured to the YCxCz color space in 3D or 48fps mode for proper display. Contact the projector vendor to configure the projector properly or see the Section, “Device Manager Setup.”

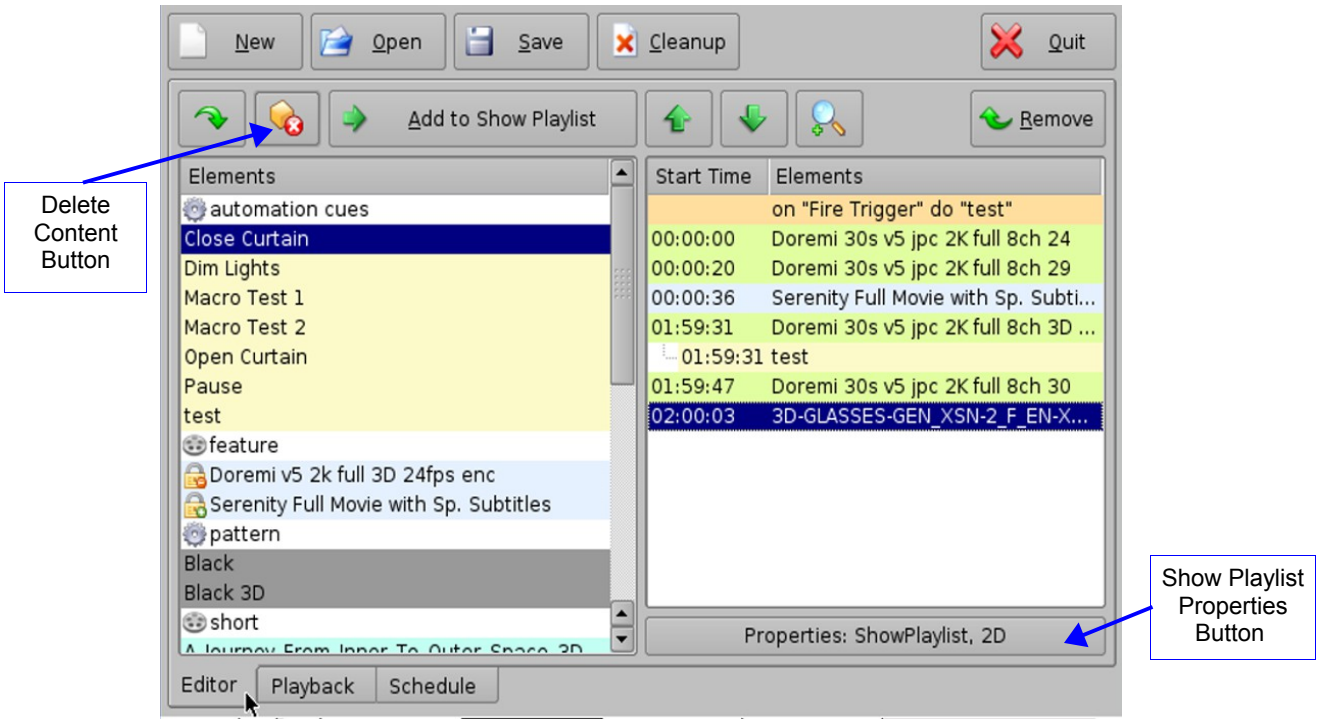


Figure 174: CineLister GUI Editor Tab

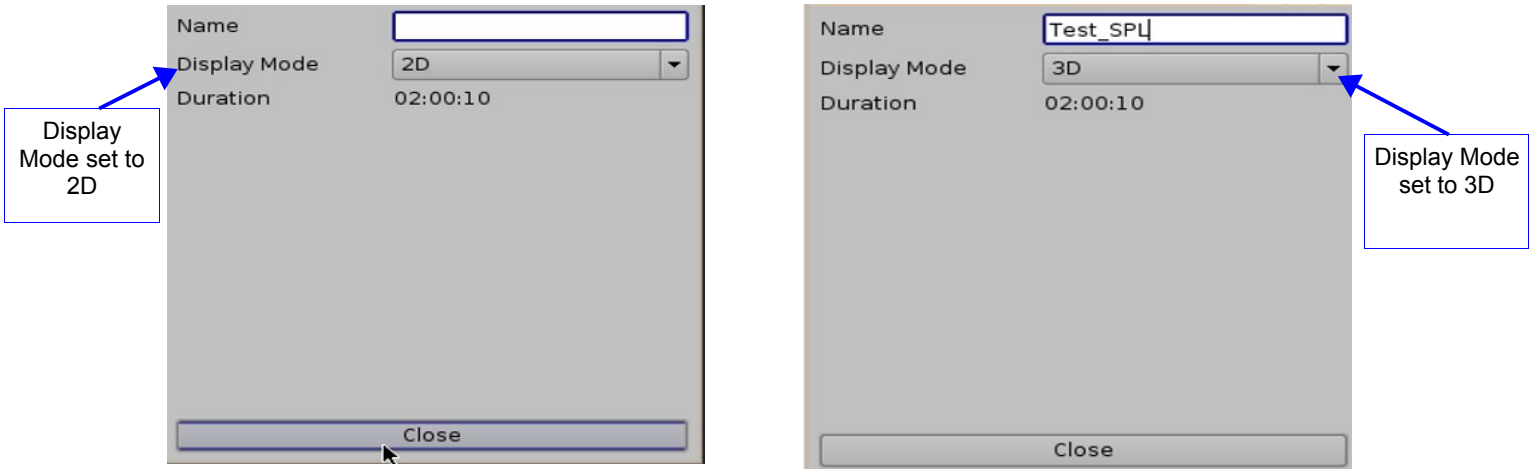


Figure 175: Show Playlist Properties 2D/3D Mode Window

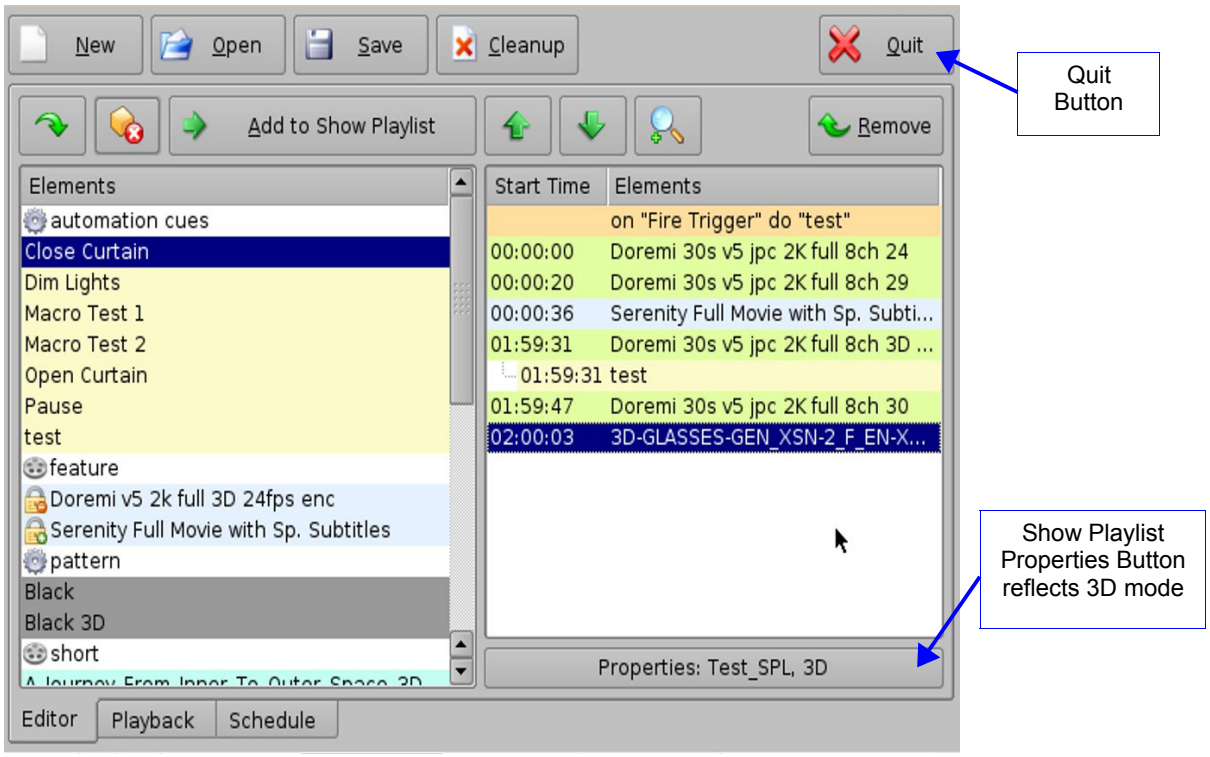


Figure 176: CineLister GUI – Editor Tab

14 Automation Cues

An Automation Cue is an action/demand that is sent from the DCP-2000 to any external device connected to the DCP-2000 for the purpose of being inserted into a Show Playlist. Upon installation of the DCP-2000, Automation Cues can be pre-defined by the operator, transferred from an XML file, or added manually. Automation Cues can be added to CPLs and SPLs using CineLister.

14.1 Macro Automation Cues

A Macro Automation Cue consists of two parts, an Automation Cue and a Trigger Cue. Trigger Cues are explained fully in the Section, “Trigger Cues,” below. A Trigger Cue is an action that is sent to the DCP-2000, whereas an Automation Cue is sent from the DCP-2000. Also, Macro Cues are a sequence of actions, whereas an Automation Cue is only one action.

14.2 Macro Creation Using Macro Editor

- Go to Menu and click on Doremi Apps., then select Macro Editor.
- The Macro Editor GUI will appear (Figure 177).
- Click on the New Macro button to begin the creation process.
- The user will be prompted to enter a name for the Macro Automation Cue (Figure 178).
- Click the Ok button when done and the Macro Editor GUI will re-appear.
- Click on Save when done creating the Macro Automation Cue.
- The new macro will appear in the Macro Editor Window (Figure 179).
- Click the Save button when done.

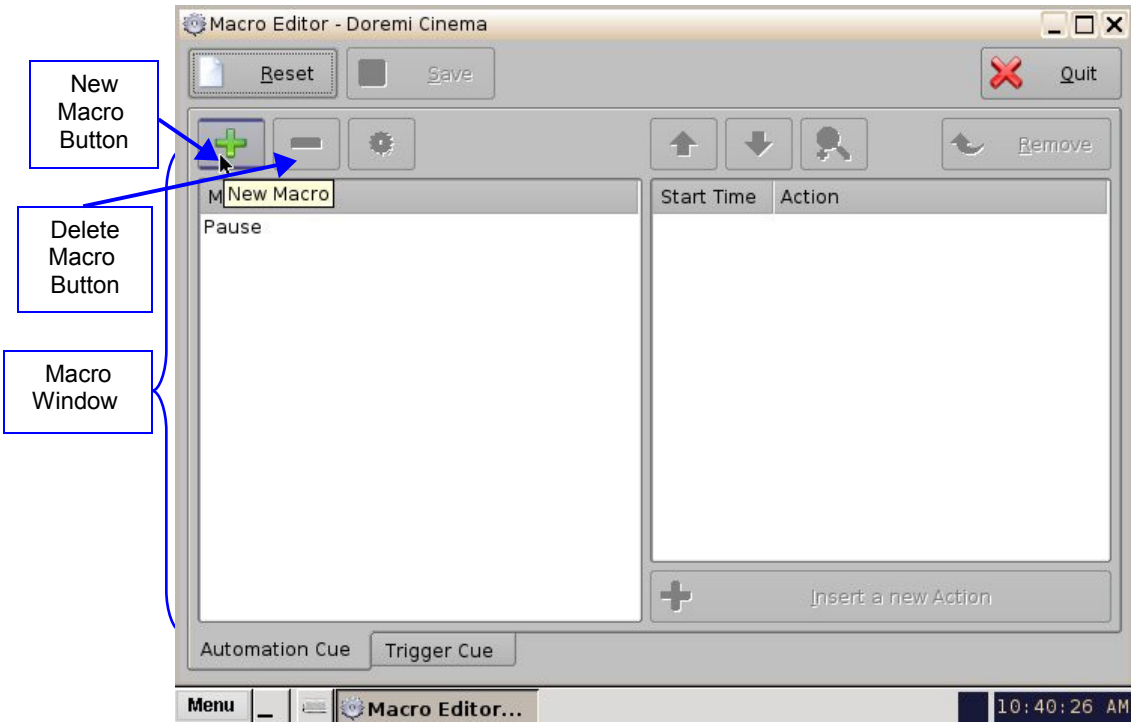


Figure 177: Macro Editor Window

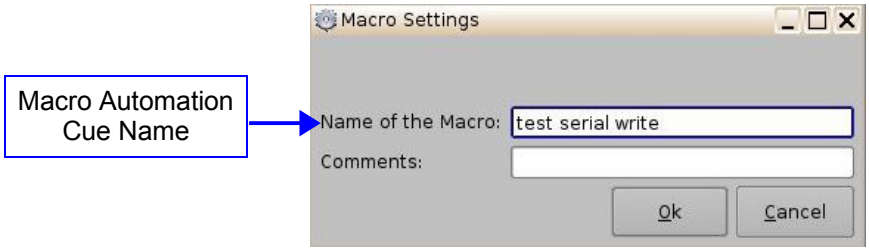


Figure 178: Macro Automation Cue Name

14.3 Editing a Macro Automation Cue

- To remove (delete) a Macro Automation Cue, select it in the Macro Editor window and click the Delete Macro button (Figure 179).
- To edit the name of an existing Macro Automation Cue, click the Edit button or double-click on the Macro itself (Figure 179).
- Use the up and down arrows to re-arrange the Automation Cues.
- Click the Save button when finished.
- Selecting the Reset button will close a document without saving the changes. The user will be prompted to a window asking to save the changes (Figure 180). Use this with caution.

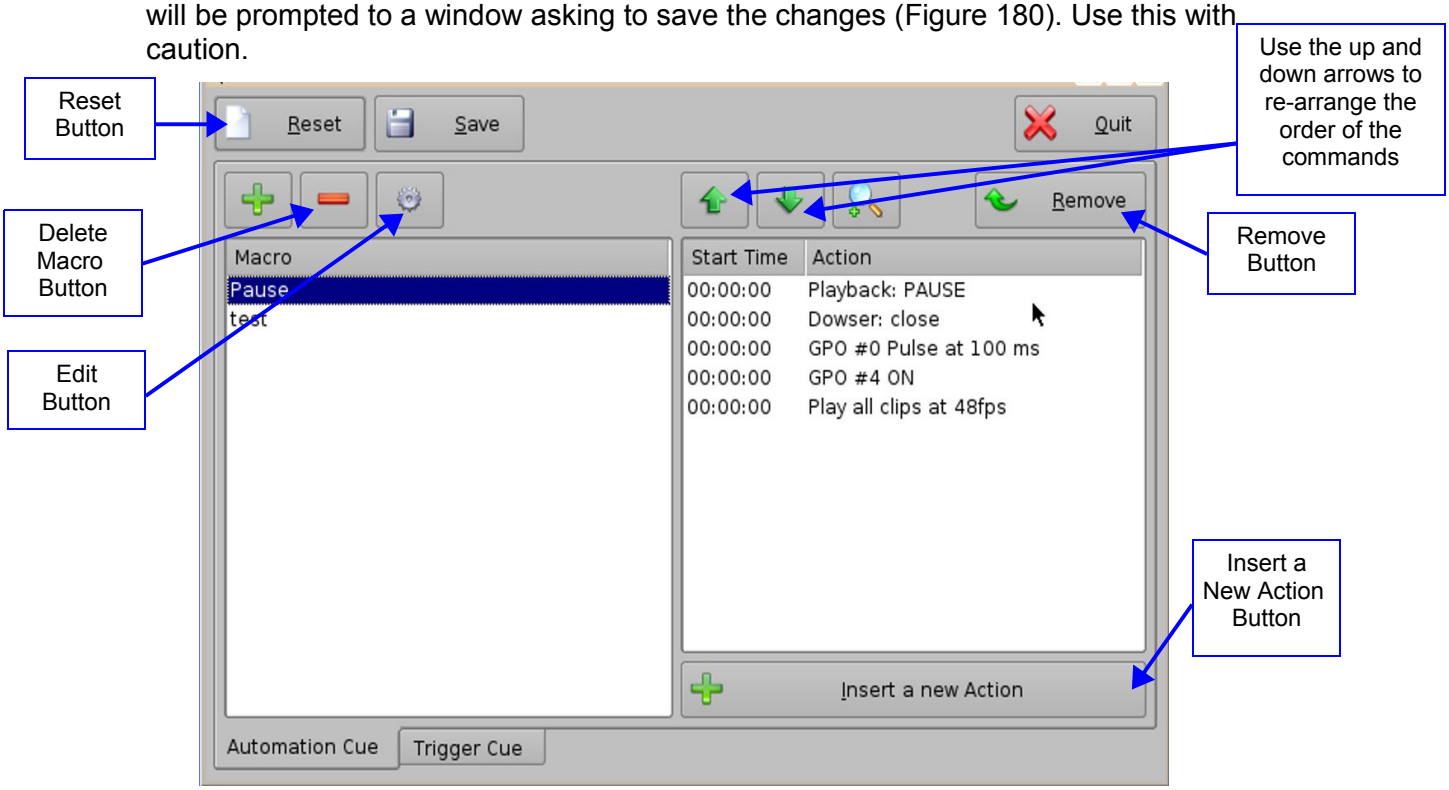


Figure 179: Macro Editor Window

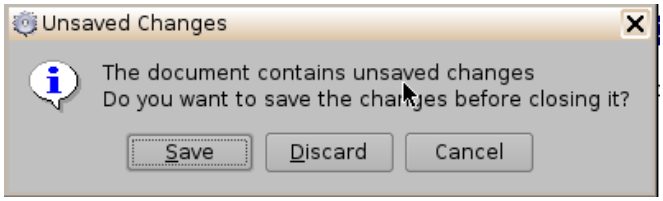


Figure 180: Unsaved Changes Window

14.4 Inserting Actions into Macro Cues

- Go to Menu and click on Doremi Apps., then select Macro Editor.
- Click the Insert a New Action button from the Macro Editor window (Figure 179).
- The Add a New Action window will appear (Figure 181). The Add a New Action window provides a list of available actions to be used within a Macro Automation Cue.
- To add an action to the Macro Automation Cue, click on its corresponding action button in the left side of the Add a New Action window and click the Add button (Figure 181).

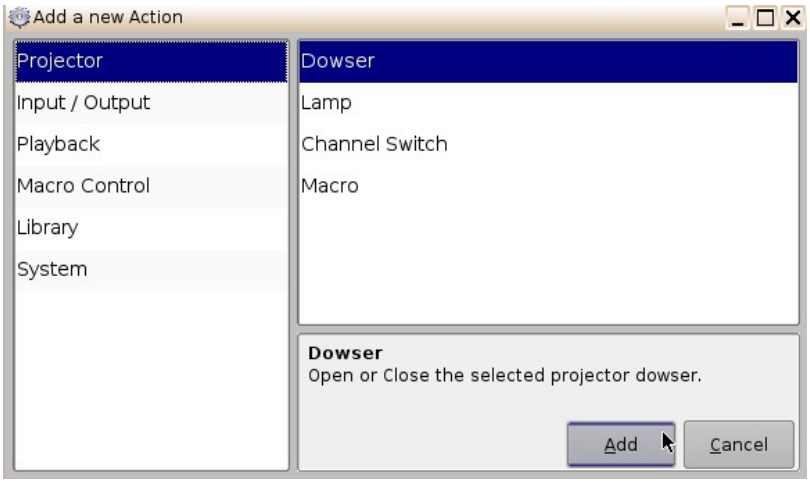


Figure 181: Add a New Action Window

- The Add a New Action window provides a list of available actions, on the left side, to be used within a Macro Automation Cue. The actions available include the following:
- **Projector**:
  - Projector Dowser: open or close the selected projector dowser.
  - Lamp: Power ON or Off the selected projector lamp.
  - Projector Channel Switch: Switch the selected projector channel.
  - Macro: Execute the macro defined in the selected projector.
- **Input/Output**:
  - General Purpose Output: Configure a GPO line.
  - Send Message: Send a message to the connected device.
- **Playback**:
  - Audio Volume: Control the audio volume output.
  - Playback Actions: Change the playback state.
  - Video Output Actions: Change the default video output format.
  - Sensio3D: Enable or disable the Sensio3D output format.
  - RealD SBS: Enable or disable the RealD SBS output format.

- **Macro Control**:
  - Delay: Insert a delay between actions.
  - Purge Pending Macro: Purge the current macro execution stack.
- **Library**:
  - Certainty: Controls the Integrated Media Block (IMB) board (on ShowVaults only).
  - Dolby DFC100: Allows for enabling and disabling the Dolby 3D color wheel.
  - eCNA: Allows for controlling the external automation box.
  - JNior Expansion Module: Allows for controlling the external automation box (9-16).
  - JNior: Allows for controlling the external automation box (1-8).
- **System**:
  - System Shutdown: Allows the user to shutdown the player.
- Click the Cancel button to cancel the action insertion.

14.4.1 Add a GPO Action to the Macro Automation Cue

- To add a GPO action, click the General Purpose Output button which is located in the Input/Output section in the Add a New Action window (Figure 182).

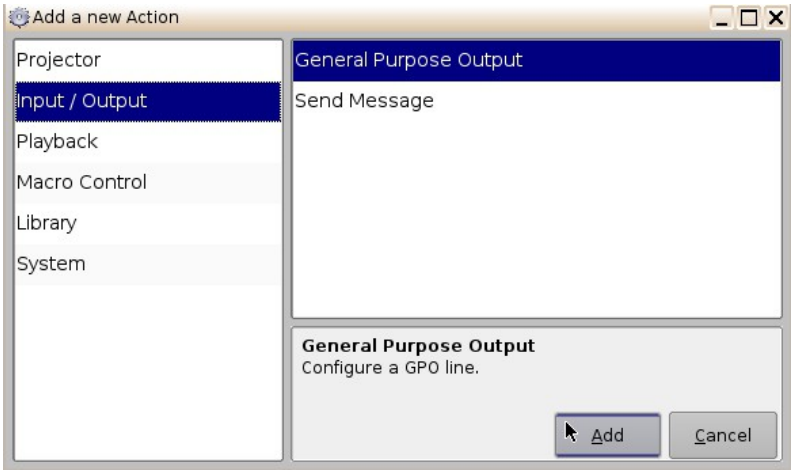


Figure 182: Add a New Action Window – GPO

- The following window will appear (Figure 183):

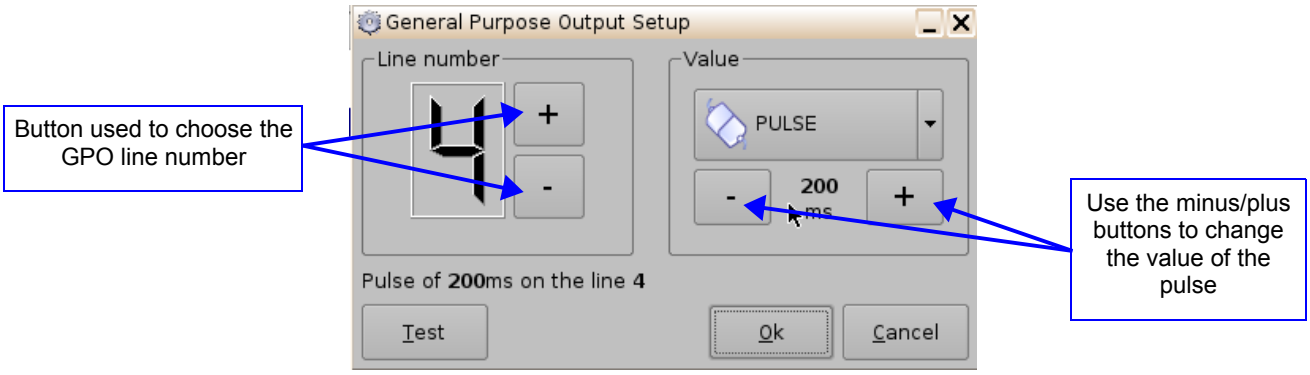


Figure 183: GPO Setup Window

- Set the line number and value according to the usage and click the Ok button.

14.4.2 Playback Action Insertion

- To add a Playback Action, click the Playback Actions button in the Add a New Action window.
- Select Playback and then select Playback Actions.
- The following window will appear:

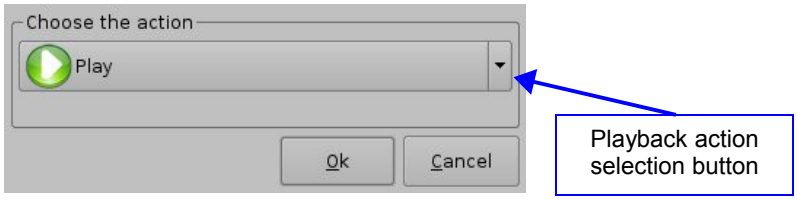


Figure 184: Playback Actions Setup Window

- Select the proper playback action between Play, Pause, Toggle Play/Pause, or Recue Show and click the Ok button.

14.4.3 Video Output Action Insertion

Choose the Video Output Actions setting from the Add a New Action window (Figure 184), and choose between the options from the drop-down list in Figure 185 below.

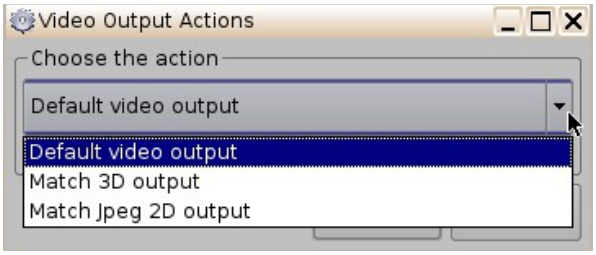


Figure 185: Video Output Drop-Down List

14.4.4 Dowser Action Insertion

From the Add a New Action window choose the Projector setting (Figure 186). Next, scroll to and select the Dowser option. Choose the name of the projector from the drop-down menu window that appears (Figure 187). Choose to have it open or close and then click Ok.

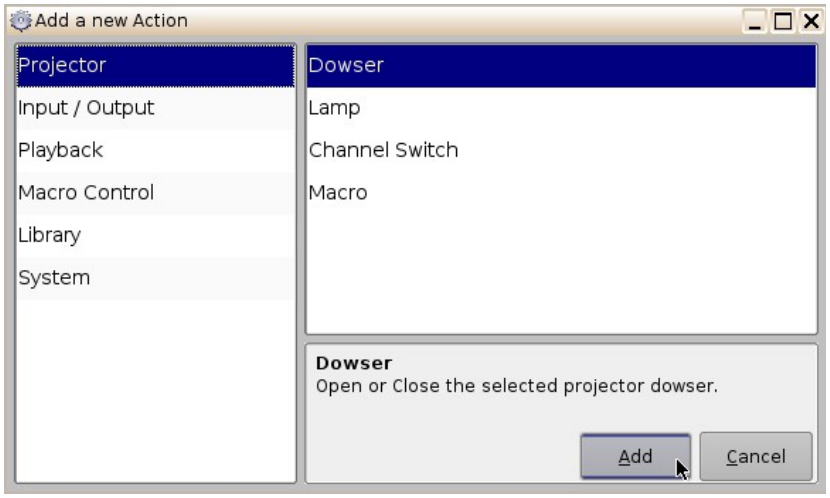


Figure 186: Add a New Action Window - Dowser

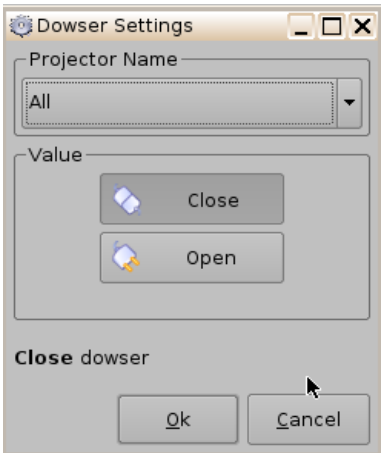


Figure 187: Dowser Settings Window

14.4.5 Projector Channel Switch Insertion

From the Add a New Action window choose the Projector setting (Figure 188). Next, scroll to and select the Channel Switch option. Choose the name of the projector from the drop-down menu window that appears (Figure 189). Use the plus/minus buttons to select the channel to send the command to.

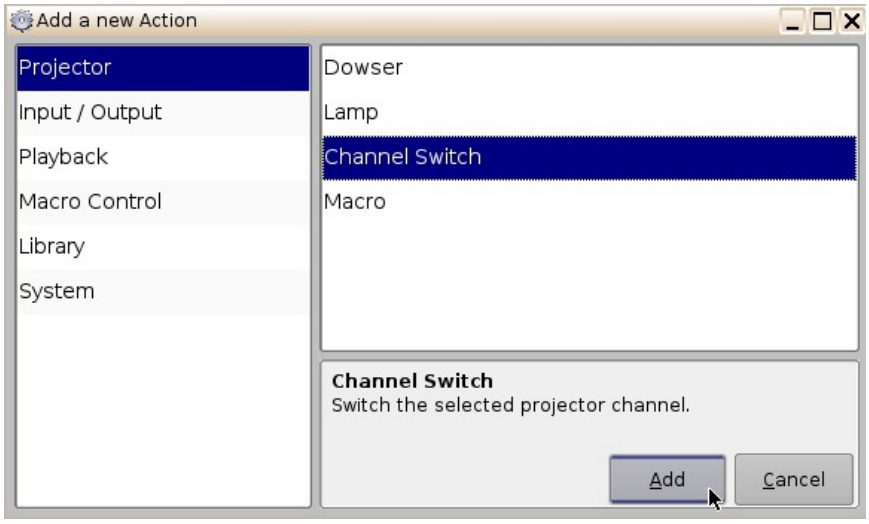


Figure 188: Add a New Action Window - Channel Switch

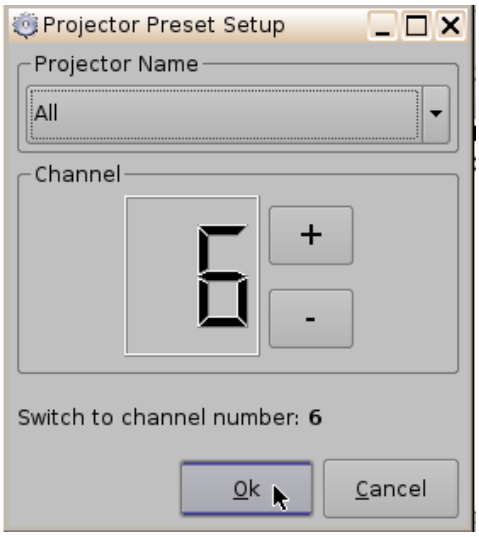


Figure 189: Projector Channel Switch

14.5 Automation Library Usage

14.5.1 Using Automation Library

Support for theater automation control is provided. The list of currently supported devices are:

- eCNA
- JNior Expansion Module
- JNior

When one of the supported devices (e.g., eCNA and JNior) is added, the Macro Editor will allow the user to use the corresponding commands for each device.

- To use a library command, click on Library in the Add a New Action window.
- Select one of the available devices in the left part of the following window.

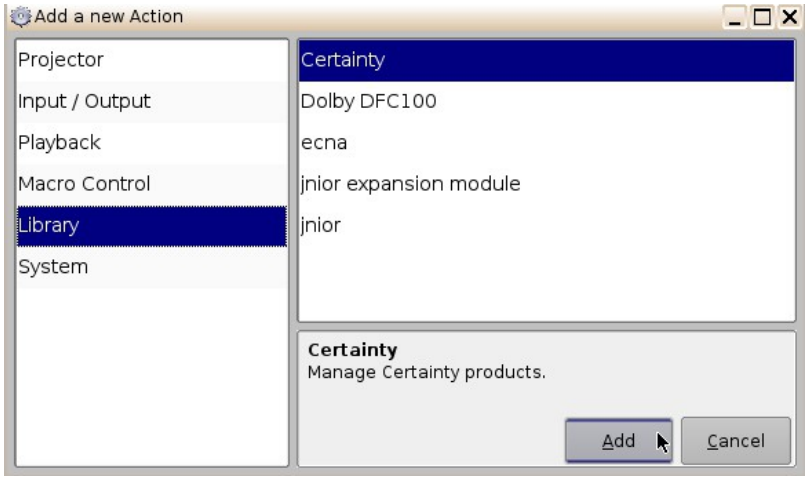


Figure 190: Macro Editor GUI Automation Configuration Example

- Select one of the available devices in the right part of the window and click the Add button.
- The following pop-up window will appear:

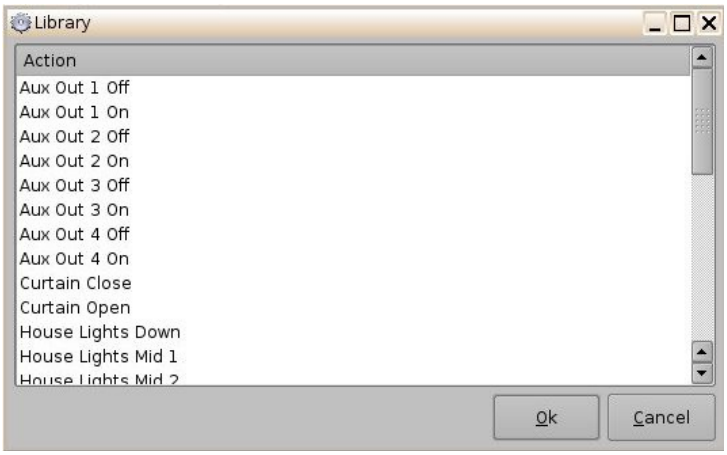


Figure 191: Macro Editor GUI – Library Automation Configuration

- Select the desired action and click the Ok button, or Cancel to cancel this command.

14.5.2 Resulting Macro Setting

- After inserting the three actions “Delay 1seconds”, “GPO line #3 ON”, and “Playback: PLAY” in the Macro “Test_Macro,” as called in the example, the right part of the Automation Cue tab will display the added actions as illustrated below:

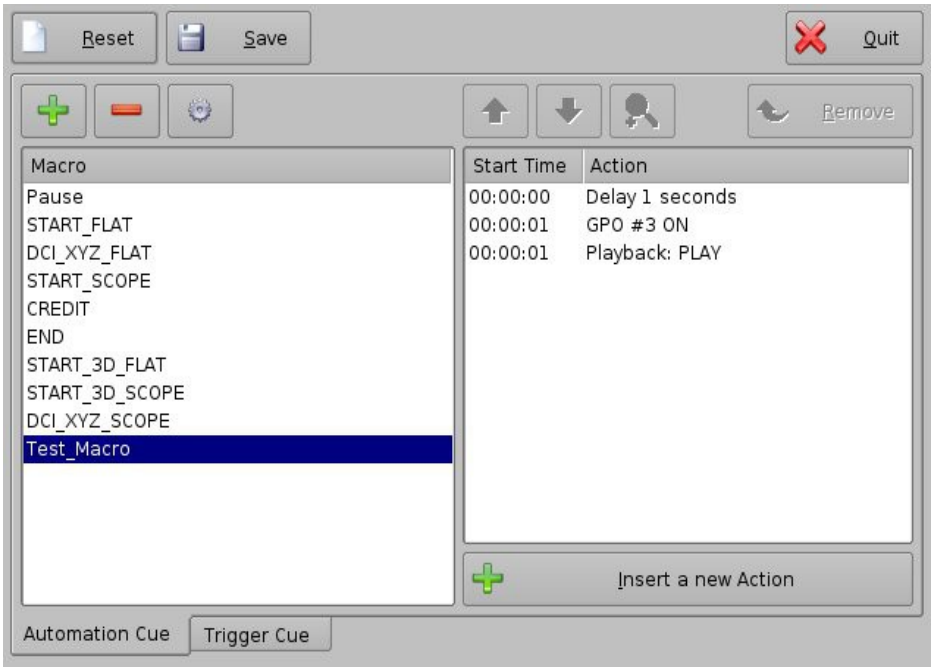


Figure 192: Macro Actions Window Updated

- Click the Save button to save the “Test_Macro” settings.
- Enter the password to save settings and proceed.

14.5.3 Action List Management

14.5.3.1 Action Re-Ordering

The two arrows allow the user to change the order of the actions in the Macro Automation Cue (Figure 192). Using the arrows, each action can be moved to the top or to the bottom of the Macro Actions window.

- In order to move an action toward the top of the list, select it and click on the arrow pointing to the top.
- If an action needs to be moved toward the bottom of the list, select it and click on the arrow pointing to the bottom.
- Repeat the two steps above until the required actions order is obtained.

14.5.3.2 Action Edition

The user can edit an action of any given Macro Automation Cue by selecting it. The user can also click on the Edit Action button illustrated in Figure 192. The user will be able to edit the properties and set the action when added to the Macro Automation Cue.

14.5.3.3 Action Removal

- To remove an action from the list of actions associated to a Macro Automation Cue, select the action in the Macro Actions window and click the Remove button (Figure 192)

14.5.4 Macro Saving

- Repeat the Macro creation operations for all the Macro Automation Cues and click the Save button.
- The user will be asked for a password to be able to perform the operation (Figure 193).

Figure 193: Password Confirmation Window

- Enter the appropriate password and click the Ok button.
- The Macro Automation Cues will be available in CineLister in order to create a Show Playlist.

Note: The saving operation will not only save the Macro Automation Cues, but also the Trigger Cues that were created.

15 Trigger Cue Tab

A Trigger Cue allows for the execution of a Macro Automation Cue upon the occurrence of an event from an external device using a Signal or General Purpose Input. When the user selects an event to occur from the external device, the occurrence of that event “triggers” a Macro Automation Cue. The Macro Automation Cue will then be executed. Both the event and the Marco Automation Cue are defined during the Trigger Cue creation.

Note: The Signal comes from an external device connected over the Ethernet. The external device options are: eCNA, JNior, and Raw.

Example: If a Trigger cue is based on the event “Wait for GPI #1 ON,” it is possible to link a specific Macro Automation Cue as presented above in order to be executed when GPI #1 is ON.

The user has the choice to program Trigger Cues to be available during the whole Show Playlist or only during a specific Show Playlist element.

15.1 Trigger Cue Tab Overview

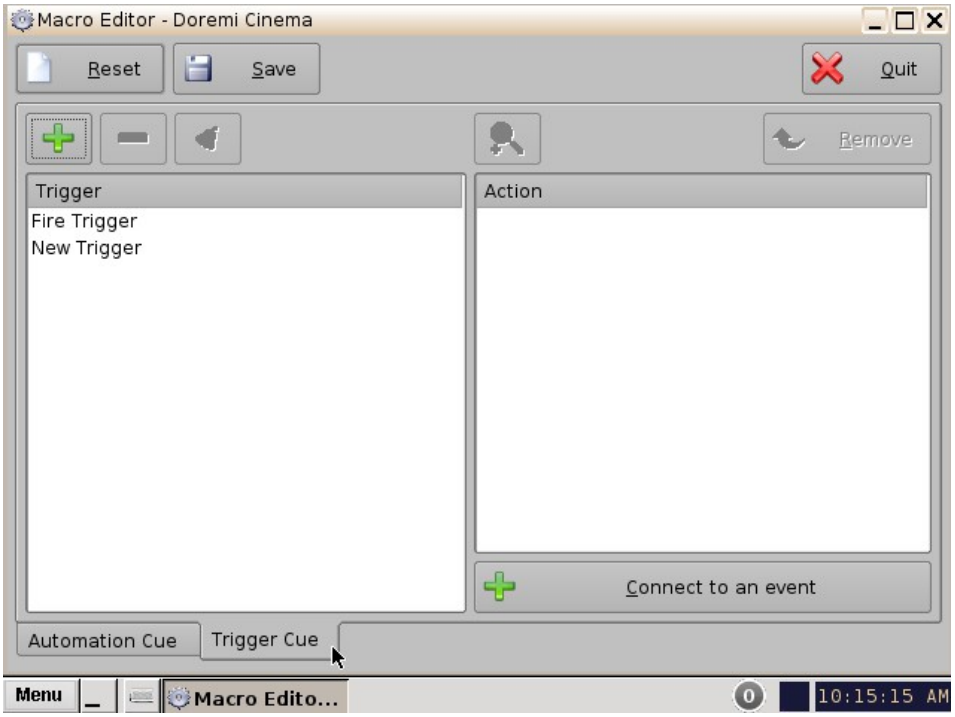


Figure 194: Macro Editor - Trigger Cue Tab

15.2 Trigger Cue Creation

- To create a new Trigger Cue, click the Add button.
- The same type of window for the Automation Cue tab allowing the user to enter the Trigger Cue name will appear (Figure 195).

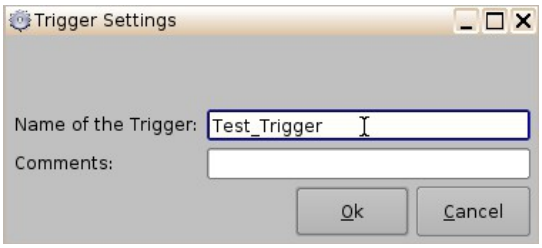


Figure 195: Trigger Cue Setting Window

- Enter the appropriate name. It will be the name used by the CineLister application to insert the Trigger Cue in a Show Playlist.
- The newly created Trigger Cue will appear in the Trigger window and it will be ready to connect to a GPI event.

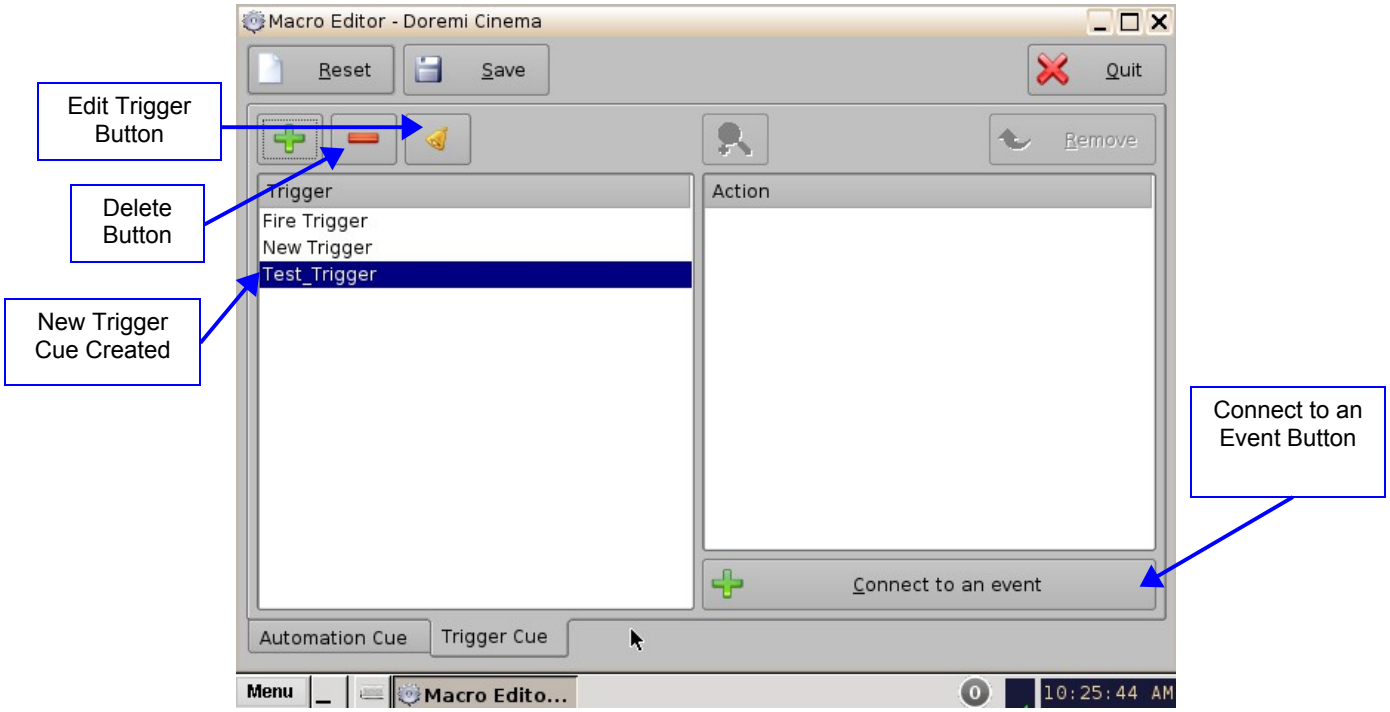


Figure 196: Trigger Cue Defined

- To edit an existing Trigger Cue, select it in the Trigger window and click on the Edit Trigger button (Figure 196).
- The user will be able to edit the name of the Trigger Cue using the same window.
- To remove a Trigger Cue, select it in the Trigger window and click the Delete button.

15.2.1 Connection to an Event

- To connect a Trigger Cue to an event, select it in the Trigger window and click the Connect to An event button (Figure 196).
- The following window will appear:

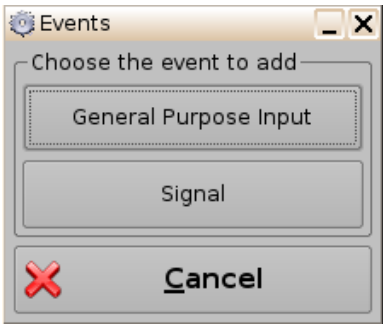


Figure 197: Events Window

- To connect the selected Trigger Cue to a GPI event, click the General Purpose Input button of the Events window (Figure 197).
- The following window will appear:

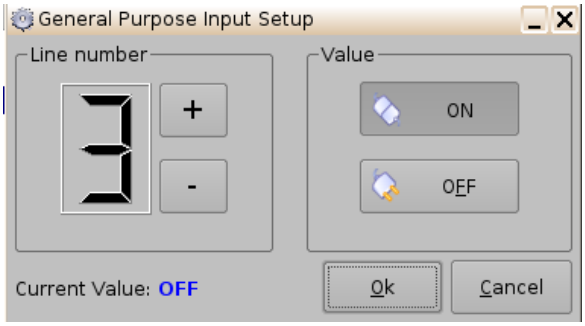


Figure 198: General Purpose Input Setup Window

- Define the GPI line number and value to connect to the Trigger Cue and click the Ok button.
- The connected GPI event will then appear in the right part of the GUI.
- To connect the selected Trigger Cue to another signal, click the Signal button of the Events window (Figure 197).
- The following window will appear:

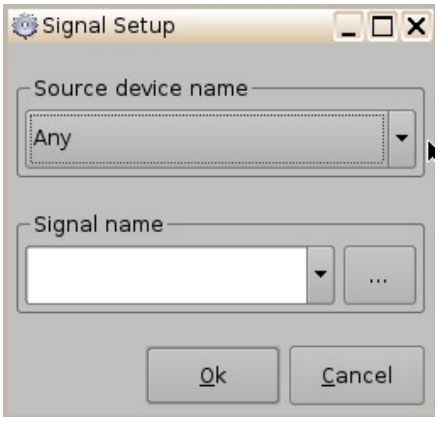


Figure 199: Signal Setup Window

- Click the Ok button when the appropriate signal name is defined.

15.2.2 Connection to a Signal Event

- Click the Connect to an Event button from Macro Editor's Trigger Cue tab. The Events window will appear (Figure 197).
- Click the Signal button. The Signal Setup window will appear.
- Choose the device from the drop-down menu (Figure 199).
- Choose the signal from the drop-down menu (Figure 199).
- Click Ok when finished and the connected Signal event will appear in the right part of the Editor tab.

Note: The "..." button will prompt the Signal Library window to appear (Figure 200). The Signal Library has a list of additional signals that are not listed in the signal drop-down menu. For example, the JNior device has a subsidiary device called the JNior Expansion Module. However, the JNior Expansion Module does not appear in the source device drop-down menu. Use the Signal Library button to access all possible signals.

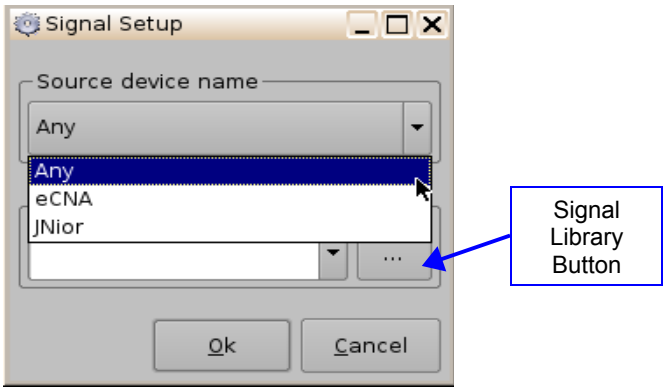


Figure 200: Device Name Window

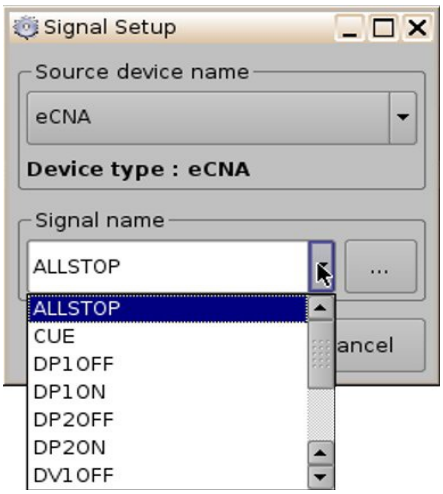


Figure 201: Signal Setup Window

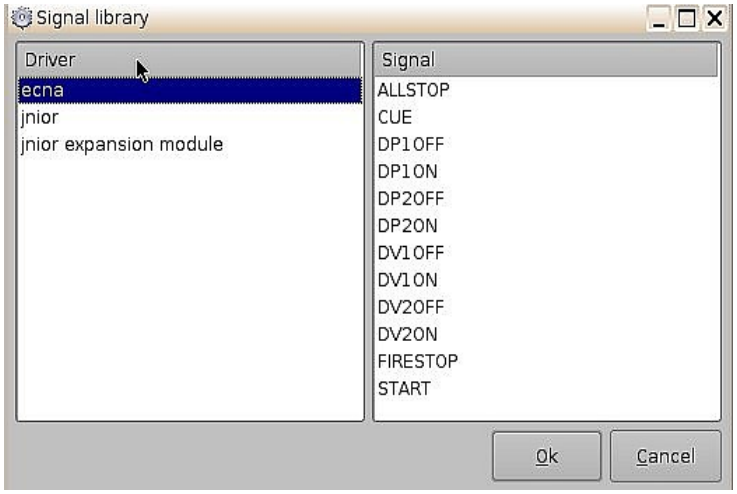


Figure 202: Signal Library Window

15.3 Trigger Cue Saving

- Repeat the Trigger Cue creation operation for all Trigger Cues that are created and click the Save button.
- The user will be asked for a password to be able to perform the operation.

Figure 203: Password Confirmation Window

- Enter the appropriate password and click the Ok button.
- The Trigger Cues will now be available within CineLister, so that the user can include them in a Show Playlist.

Note: The saving operation will not only save the Trigger Cues, but also the Macro Automation Cues.

15.4 Pre-Defined Macro Usage

If the user has a pre-defined macros.xml file containing automation and trigger cue definitions, then copy it into the **/doremi/etc/** folder and the corresponding macros will be visible in the Macro Editor GUI. The user will then be able to update the cues, if needed, from the Macro Editor GUI.

15.5 Default Cues

The default_cues.xml file can be used to load an automation and trigger cues playlist prior to any playback. This is to avoid having to add a Fire Alarm trigger cue to each show. If the user is provided a default_cues.xml file, copy it into the **/doremi/etc/** folder.

15.6 Startup Scripts

- Copy the script to be executed automatically at boot in the following folder: **/doremi/etc/rc.d/**

16 Add a Trigger Cue to a Show Playlist

- Go to the CineLister application from the Menu on the DCP-2000 desktop.
- In the Editor tab, select a Trigger Cue on the left part of the GUI and click on Add to Show Playlist (Figure 204).
- The Edit Trigger Cue window will appear (Figure 204).
- Select the Automation Cue to associate to the Trigger by clicking on it in the Automation Cues window.
- The default setting is to add the Trigger Cue to all elements of the Show Playlist (Figure 204).
- Click Ok when finished.

Note: If the user selects the trigger cue to be available only for one element of the SPL, the server will automatically apply the trigger cue to the last element in the SPL (Figure 204).

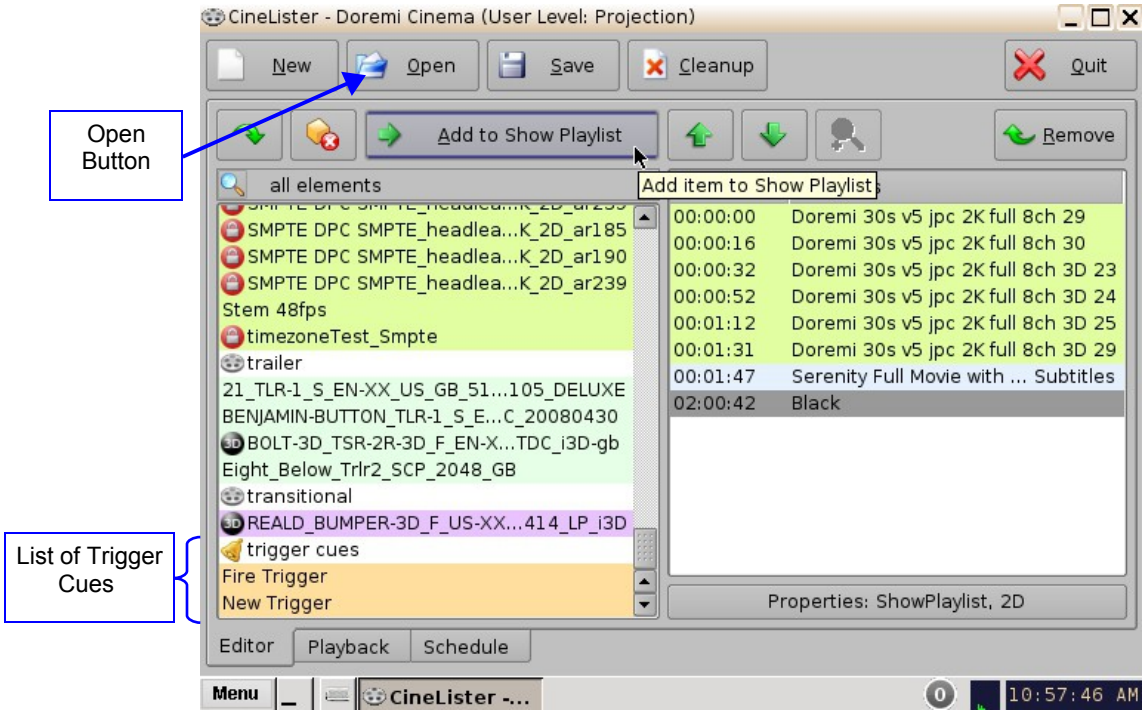


Figure 204: CineLister GUI – Editor Tab

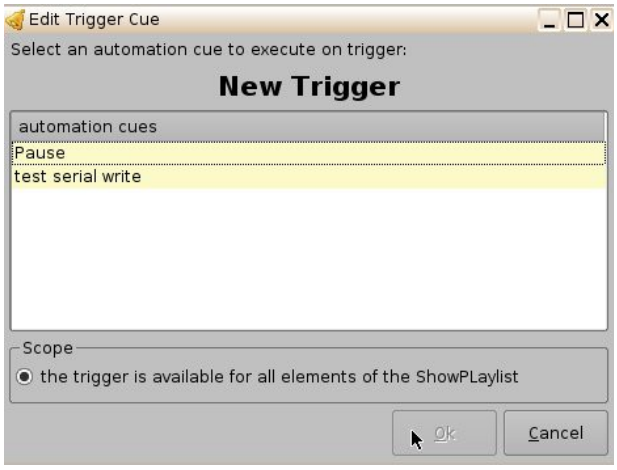


Figure 205: Edit Trigger Cue Window

16.1 Add a Trigger Cue for One Element of the Show Playlist

- Go to the CineLister GUI Editor tab. From the right pane of the GUI, select the element the Trigger Cue is to be added to. Then from the left pane of the GUI select the Trigger Cue.
- Click the Add to Show Playlist button.
- The user will be prompted to a window asking them to “select an automation cue to execute on trigger."
- Select the automation cue from the list and then click Ok. If the user does not click Ok, they will not have added the trigger cue to the element.

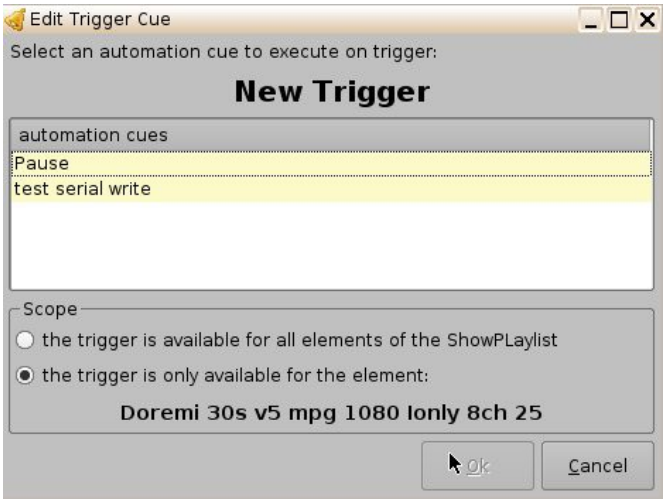

Edit Trigger Cue
Select an automation cue to execute on trigger:
New Trigger
automation cues
Pause
test serial write
Scope
the trigger is available for all elements of the ShowPLaylist
the trigger is only available for the element:
Doremi 30s v5 mpg 1080 lonly 8ch 25
Ok
Cancel

Figure 206: Edit Trigger Cue Window

17 CineLister Playback Tab

17.1 Playback an Existing SPL

- Click on the Open button from the CineLister Editor tab (Figure 204).
- The following window will appear.
- Select the SPL to play and click Open.

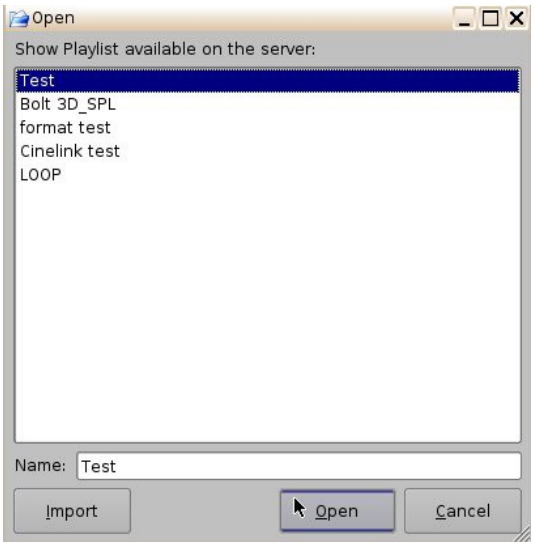


Figure 207: Open SPL Window

- Next, go to the Playback tab from the CineLister GUI (Figure 208).
- Click the Play button to load the Playlist.
- If no Playlist is selected, a message will appear stating, “The Show Playlist is Empty” (Figure 209).

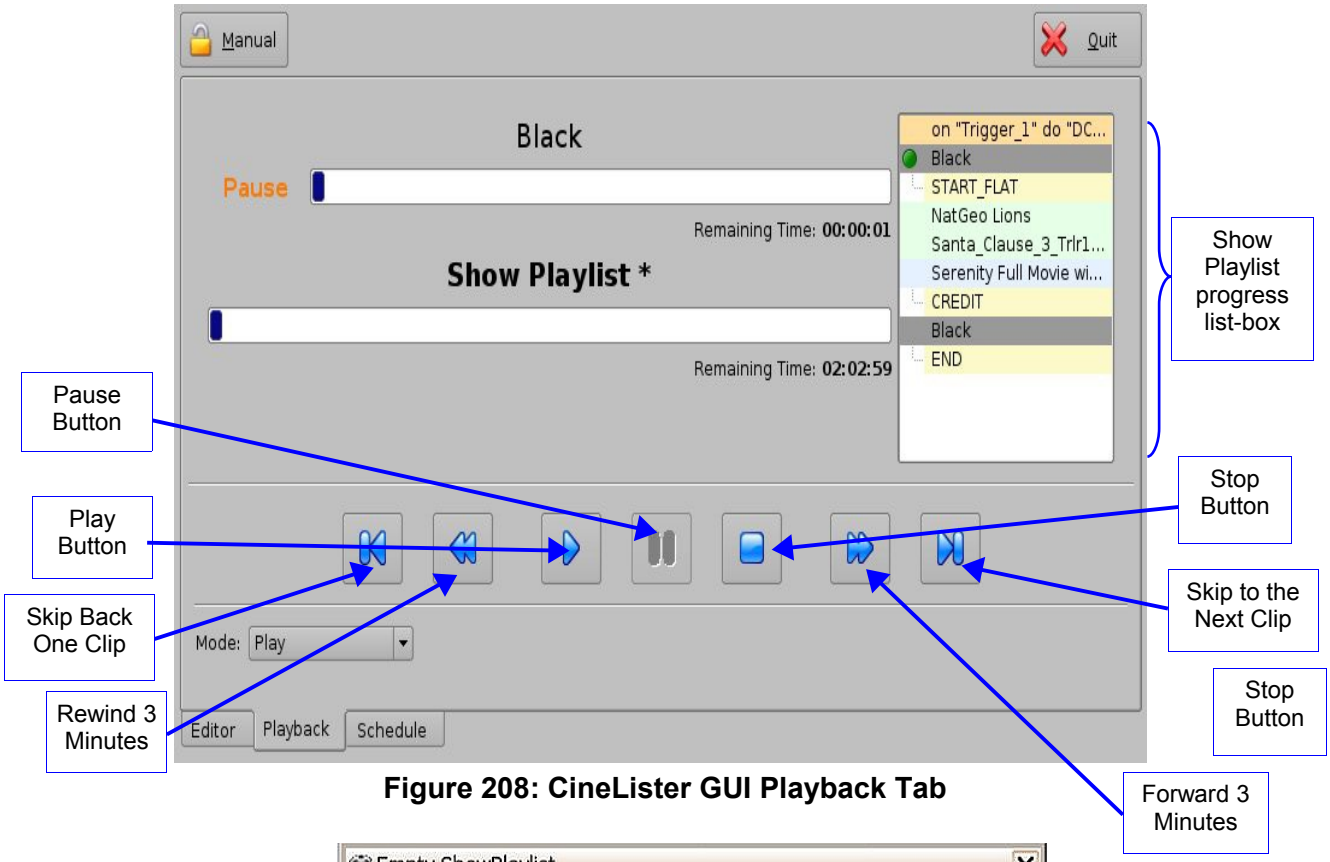


Figure 208: CineLister GUI Playback Tab

Figure 209: Empty Show Playlist Window

17.2 Playback Progress

The SPL progress list-box displays the order of the playback (Figure 210).

- Elements already played are flagged using a yellow mark.
- Elements currently being played are flagged using a green mark.
- Elements that were not played due to an error are flagged using a red mark.
- Elements that have not yet been played do not have any marks next to them.

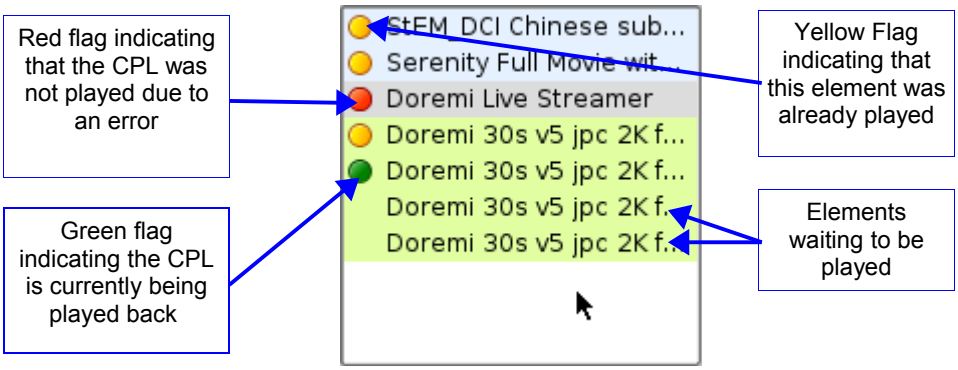

Red flag indicating that the CPL was not played due to an error
Green flag indicating the CPL is currently being played back
StEM_DCI Chinese sub...
Serenity Full Movie wit...
Doremi Live Streamer
Doremi 30s v5 jpc 2K f...
Doremi 30s v5 jpc 2K f...
Doremi 30s v5 jpc 2K f...
Doremi 30s v5 jpc 2K f...
Yellow Flag indicating that this element was already played
Elements waiting to be played

Figure 210: Show Playlist Progress List-box

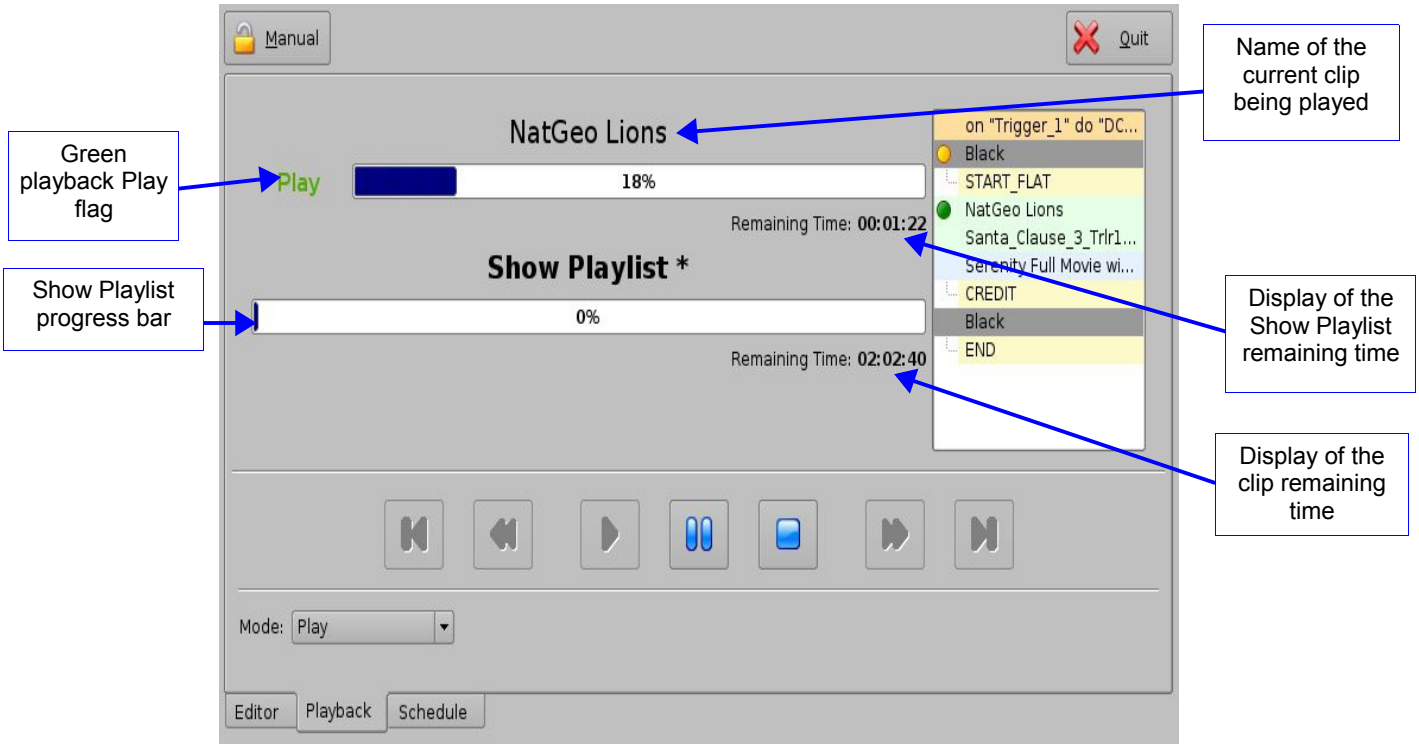


Figure 211: CineLister GUI – Playback Tab

17.3 Pause Mode

- Use the Pause button to pause the playback.

Note: Clicking the Stop button will eject the SPL.

- Use the Next and Previous buttons to go to the next or previous CPL in the Show Playlist.
- Use the Fast Forward and Rewind buttons to forward or rewind within a CPL. The default value is set at 3 minutes. See below for instructions on how to adjust the value.
- Use the Play button to resume from where the CPL was last paused.
- Select the playback mode from the Mode drop-down list: Play, Loop, Play then rewind, or Play then eject. The user will be prompted to a password window to confirm the mode; the default mode is Play.

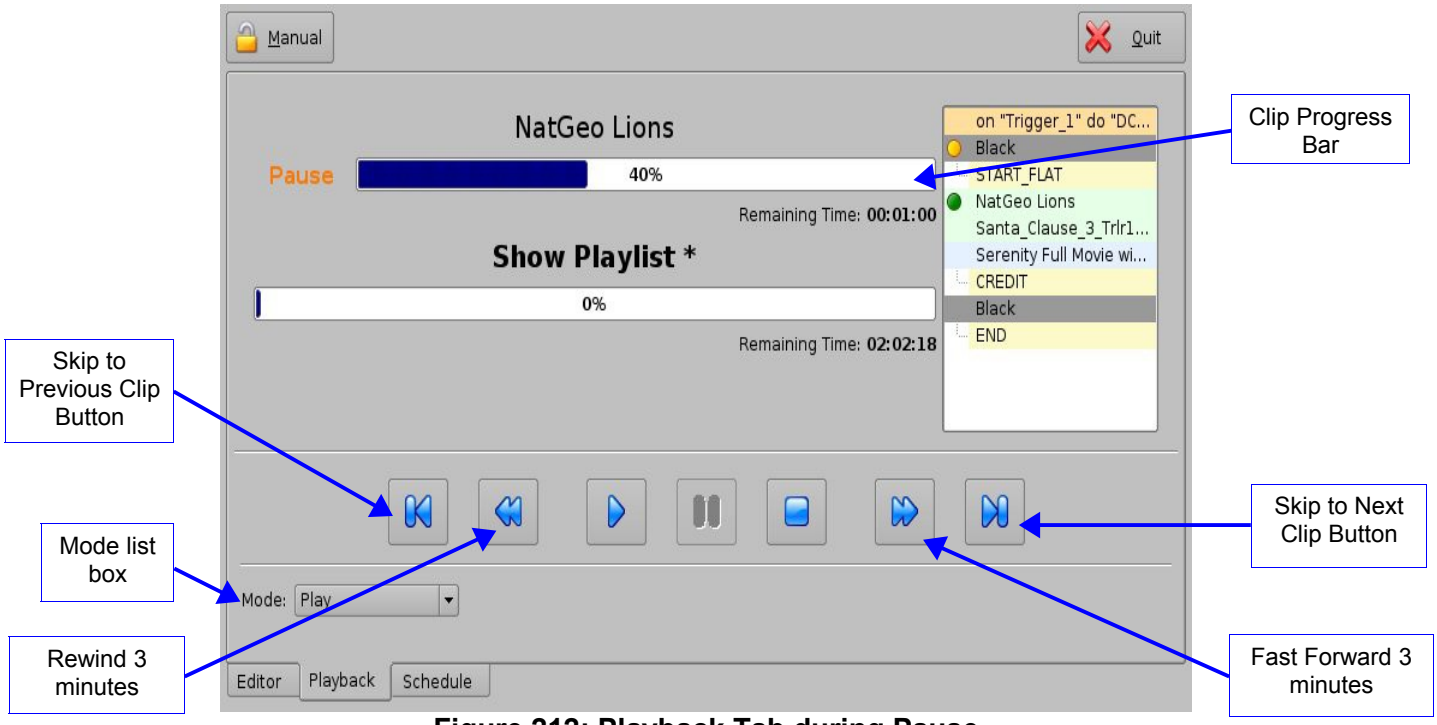


Figure 212: Playback Tab during Pause

17.4 Adjusting the Default Values

- From the desktop Menu go to System, then click on Terminal. The Terminal window will appear.
- Type “su” and press Enter (Figure 213).
- Enter the appropriate password (contact the administrator for the password).
- Type: **mount -o rw,remount /** and then press Enter.
  - **Note**: The spaces in between the characters must be respected.
- Type: **xedit /doremi/etc/default/cinelister.config.sample** and press Enter.
- The user will be prompted to the xedit window (Figure 214).
- Change the value to reflect the desired preference. Example: default setting is at 180 seconds, which is 3 minutes. To change it to 1 minute, type 60 instead.
- Make sure to click Save in the xedit window when finished (Figure 214).

Note: Use the up/down and left/right arrows on the keyboard to navigate in the xedit window.

Figure 213: Terminal Window

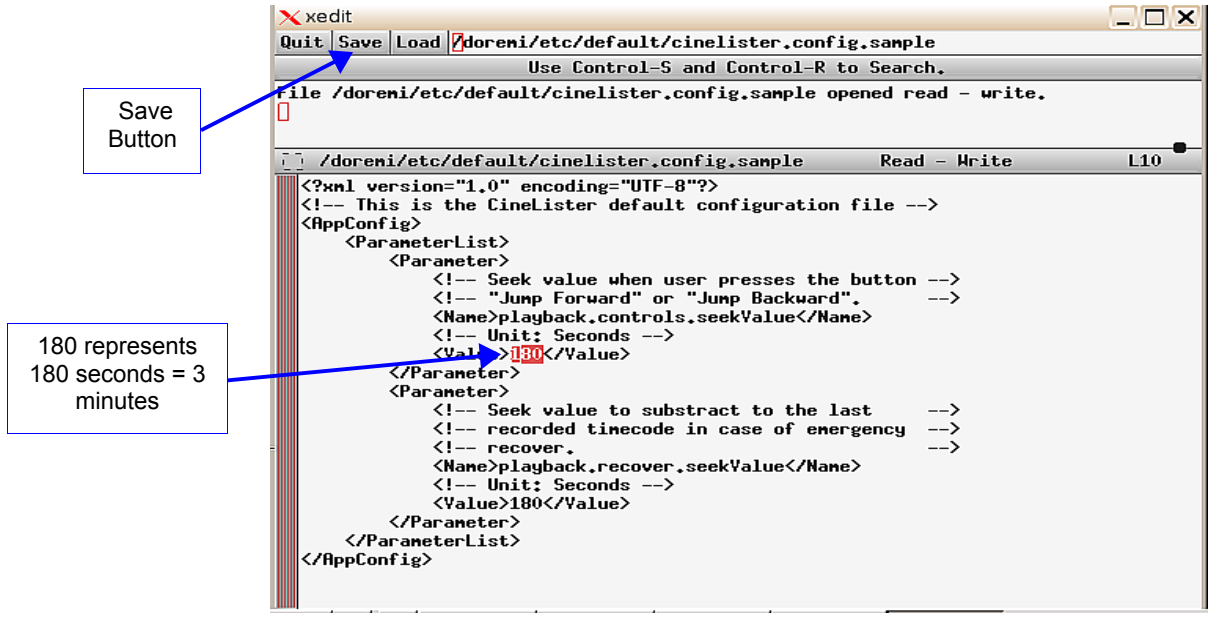


Figure 214: Xedit Window

17.5 Playback of a Live Event

By connecting a Doremi MPEG Streamer to the DCP-2000 the user can play a live event. They can create a Show Playlist for the live event using theater effects such as closing and opening of curtains, previews, trailers, and advertisements before the live event is scheduled to start. The live event is not pre-recorded and therefore cannot be re-winded or fast forwarded. See Section 7.10 for more information on creating a live event.

17.5.1 How to Add a Live Event CPL

- Connect a Doremi MPEG Streamer to the DCP-2000.
- Go to the Editor tab in the CineLister GUI. The user will see a reel icon that has “live” next to it.
- If there is no Live icon, click the Refresh button. If it still does not appear, then this means the MPEG Streamer has not been added to the Live Manager. See Section 7.10 for more information.
- Select Doremi Live Streamer from the elements window in the left pane.
- Click the Add to Show Playlist button. It will appear in the right pane.
- Go to the Playback tab and press the Play button.

17.5.2 How to Create and Play an SPL Using a Live Event CPL

- Follow the steps described above to add a Live Event CPL (Section 17.5.1).
- Select the desired elements for the SPL from the elements list in the left pane.
- Select one or several elements to be added at the same time using the Ctrl button.
- Click the Add to Show Playlist button. The elements will appear on the right pane.
- Make sure to click the Save button when finished creating the SPL.
- Enter the appropriate password from the pop-up window.

- Next, go to the Playback tab and click the Play button.

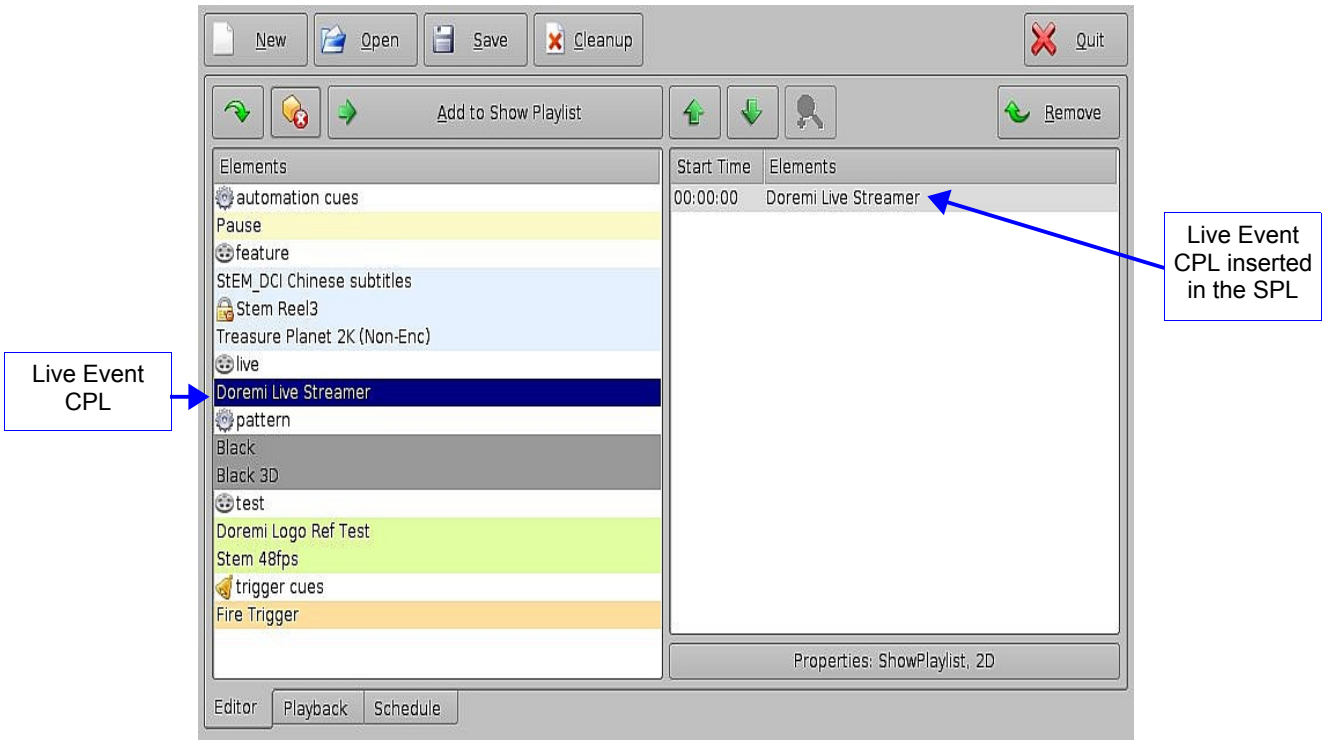


Figure 215: CineLister Editor Tab - SPL With Live Event

17.6 Playback Lock Mode

The Mode button can be used to determine manual or schedule mode.

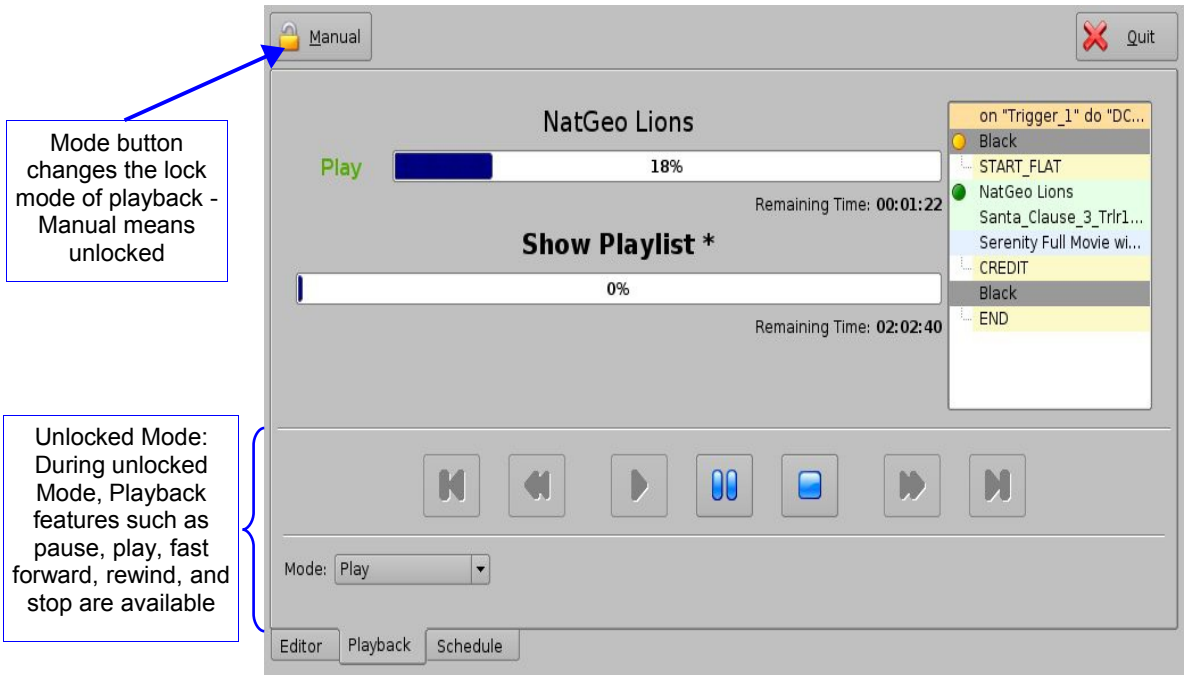


Figure 216: Playback Mode Unlocked

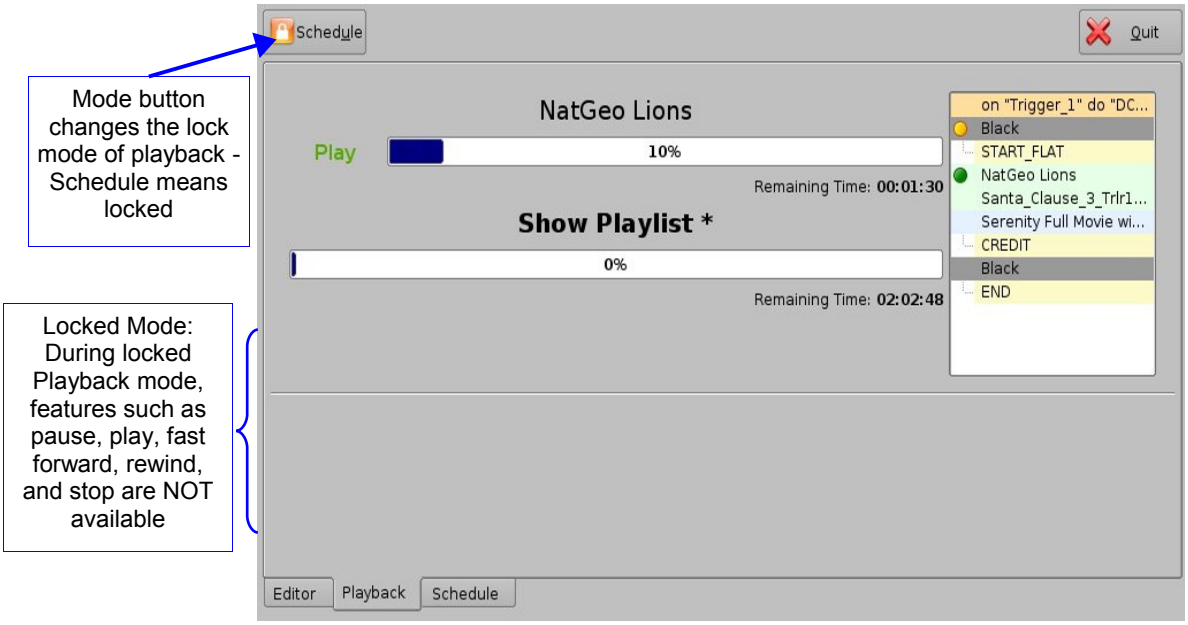


Figure 217: Playback Mode Locked

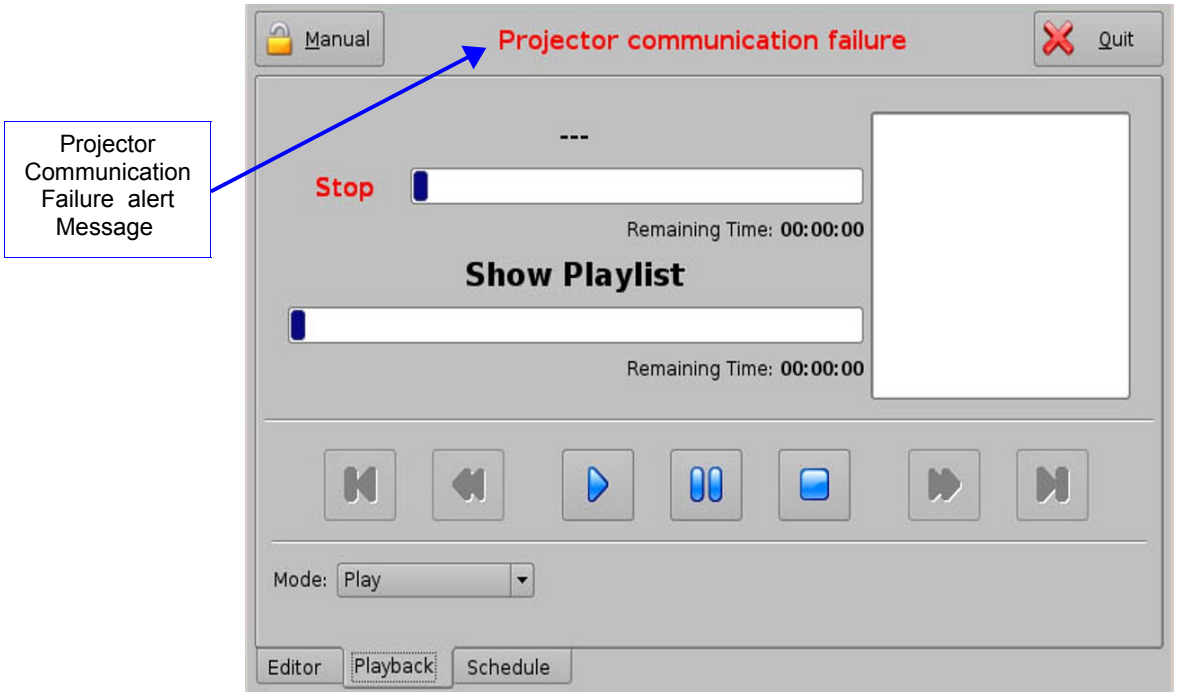
17.7 Playback Alert Messages

CineLister displays alert messages in the Playback tab. Currently, there are two alerts available:

1 Projector communication failure (Figure 218).

2 Storage is degraded (Figure 219).

- Projector Communication Failure: This message is displayed when there is no projector configured or if the server is not connected to the primary configured projector. See Section 7.6 to detect the possible reasons for this error.
- Storage is degraded: This message is displayed if at least one of the available RAID storages is degraded or faulty. For example, RAID-md0 or RAID-md1.



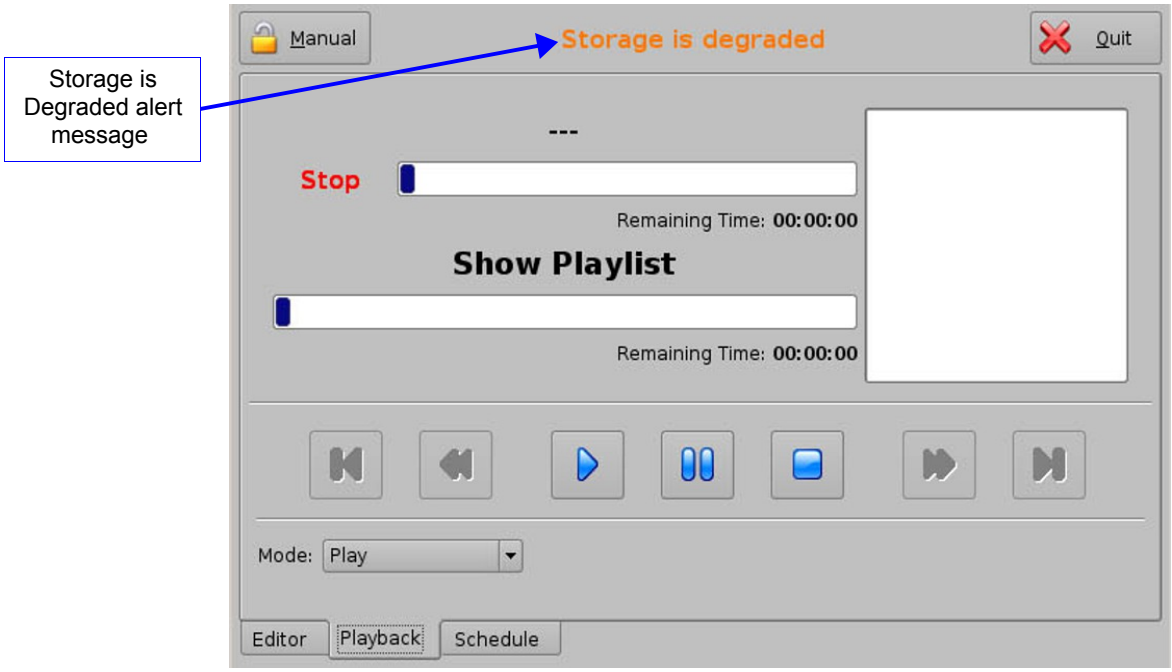


Figure 218: Projector Communication Failure Alert

Figure 219: Storage Degradation Alert

18 CineLister Schedule Tab

The Schedule tab allows the user to schedule the playback of Show Playlist's on a certain day and time. The server will automatically begin the playback of the SPLs once they have been scheduled.

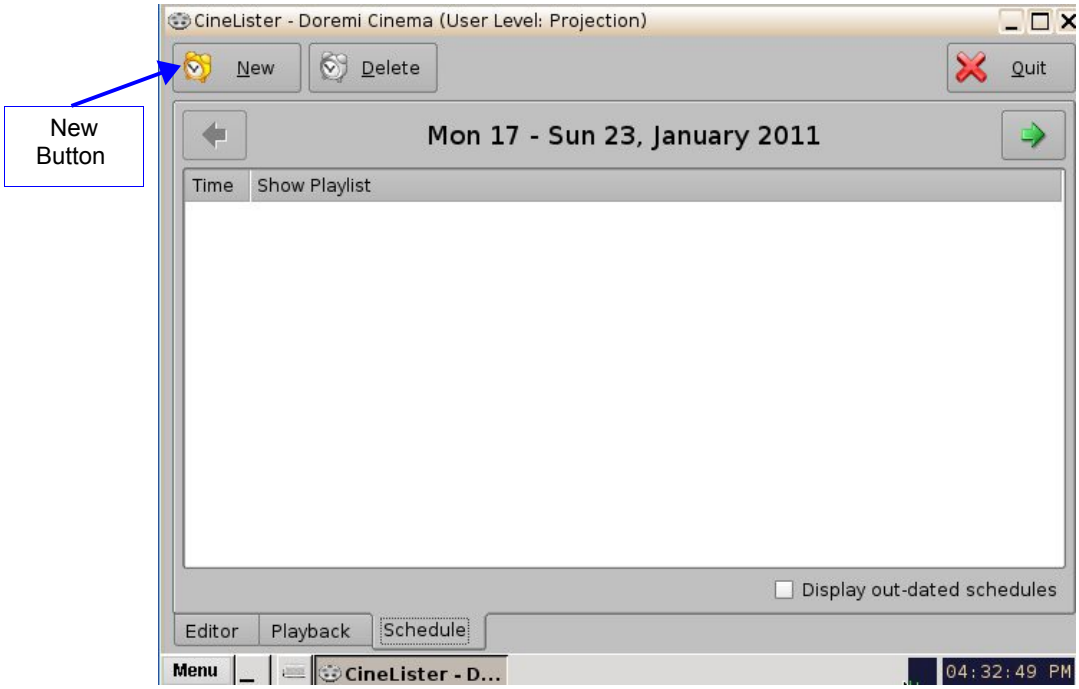


Figure 220: CineLister - Schedule Tab

18.1.1 How to Schedule Playback

- Go to the Schedule tab from the CineLister GUI.
- The Schedule tab automatically displays the current week.
- Click the New button.
- Enter the appropriate password for the authentication window that appears.
- The Edit Schedule window will appear (Figure 220).
- Select the SPL to schedule for playback from the drop-down menu.
- Use the left and right arrows to adjust the week to schedule the playback.
- Select the day(s) to schedule the playback by checking the corresponding boxes (Figure 221).
- Select the start time for the scheduled playback by using the up and down arrows.
- Click Save when finished.
- The Schedule tab will be updated to reflect the recently added schedule (Figure 222).

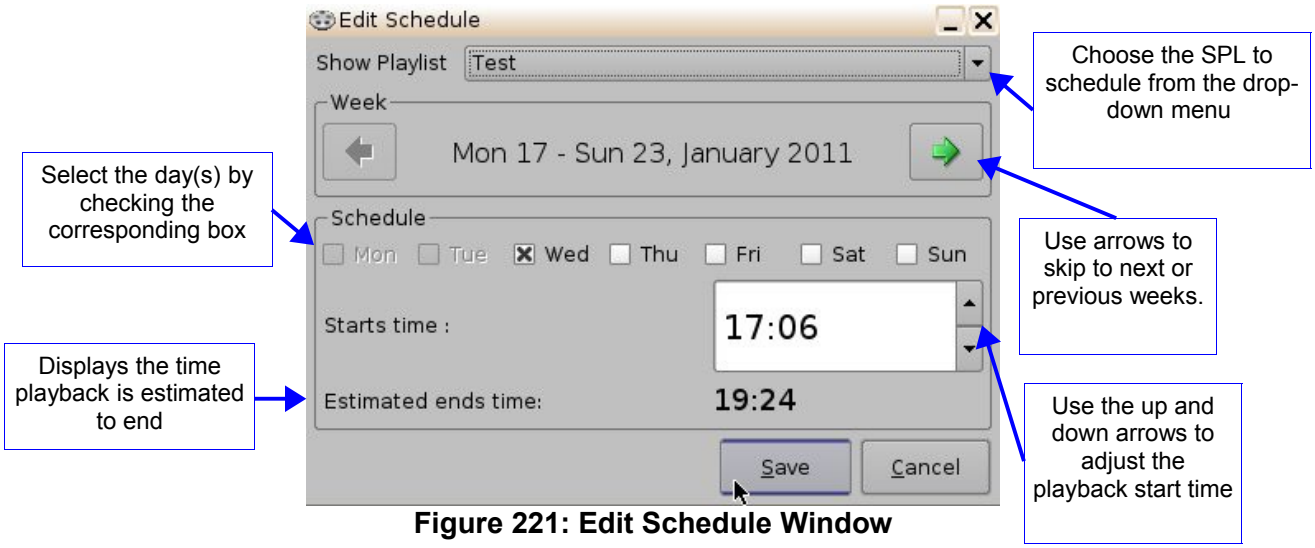


Figure 221: Edit Schedule Window

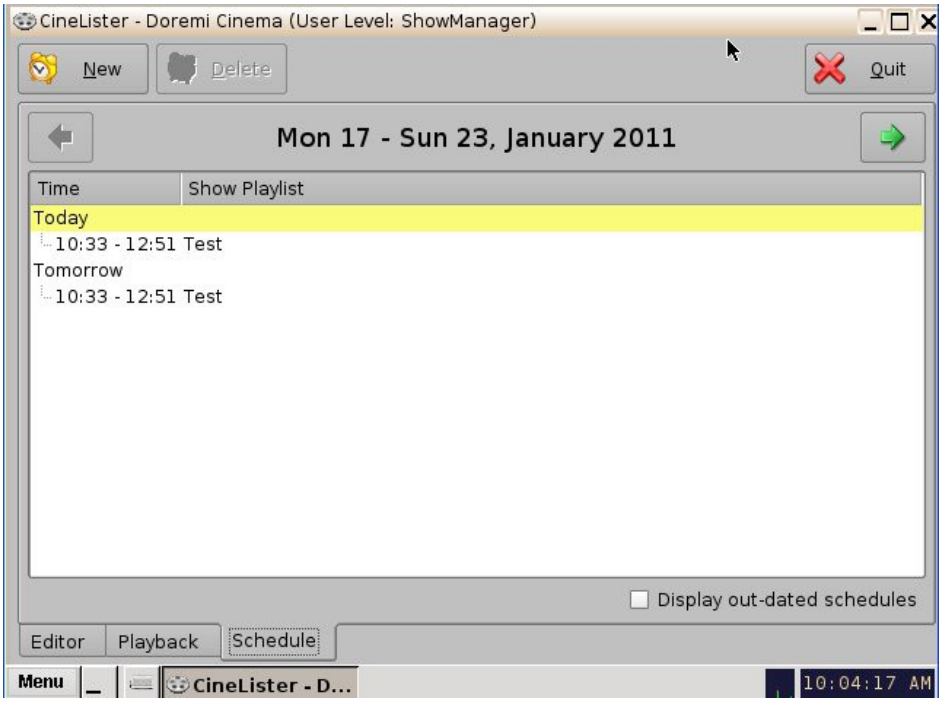


Figure 222: Schedule Tab After Playlist Addition

18.2 Schedule Playback Messages

If a show is playing in the Playback tab and there is a time conflict with a scheduled show, the user will get an alert message. The message will state that there is a scheduled SPL that will start in, for example 00:40 seconds, and asks if the user wants to eject the current show and toggle playback in scheduled mode.

- To keep playing the current show, click No.
- To stop playing the current show and allow the scheduled show to begin, click Yes. The server will stop playback and the show will play as it was scheduled.

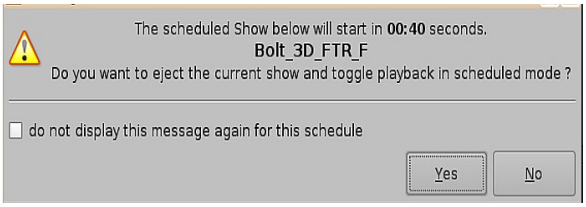

The scheduled Show below will start in 00:40 seconds.
Bolt_3D_FTR_F
Do you want to eject the current show and toggle playback in scheduled mode ?
do not display this message again for this schedule
Yes
No

Figure 223: Scheduled Show Will Start (Time Message)

18.2.1 Schedule Conflict

If the user is trying to schedule playback and one already exists for the same time and date, they will receive a Schedule Conflict message (Figure 224). The Schedule Conflict message displays the time and date for which there is a conflict. They will also receive the conflict message if they are trying to schedule playback that interrupts the scheduled time of another playback.

Figure 224: Schedule Conflict Message

18.2.2 Scheduled Show Did Not Start Error

If there is an error message stating, “The scheduled Show below did not start as expected.” this can be due to several reasons. Contact Doremi Labs Inc. for assistance (Section 1.3).

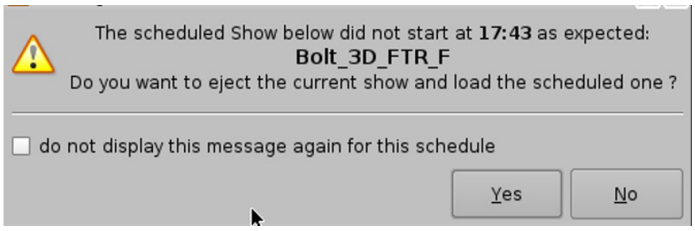

The scheduled Show below did not start at 17:43 as expected:
Bolt_3D_FTR_F
Do you want to eject the current show and load the scheduled one ?
do not display this message again for this schedule
Yes
No

Figure 225: Scheduled Playback-- Error Message

18.2.3 Show Playlist Removal

- To delete a Show Playlist from the schedule, go to the CineLister Schedule tab.
- Click on the SPL to remove it in the Schedule window (Figure 226).
- It will become highlighted, then click on the Delete button.
- The appropriate password will be needed for the password authentication window that will pop up.

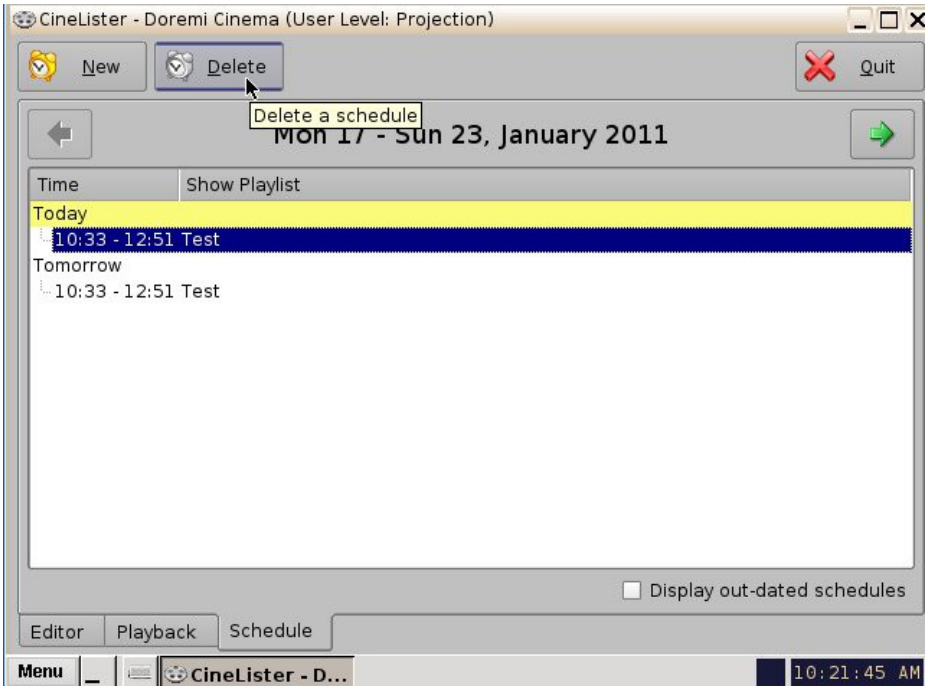


Figure 226: Schedule Tab - Scheduled Playlist Deletion

18.3 Playback Recovery Due to Power Failure

- If a power failure occurs during a scheduled playback, then playback recovery will be possible after having powered the unit back on.

18.3.1 How to Recover Playback

- When powering the unit back on after an unexpected power failure, the user will get an Invalid Shutdown message (Figure 227).
- Click Ok, and CineLister will automatically launch.
- The user will be prompted to an Information Recovery window (Figure 228).
- Click Ok and CineLister will resume playback three minutes before the power failure occurred.

Figure 227: Warning Window - Invalid Shutdown

Your last CineLister session closed unexpectedly.
The previous session has automatically been restored to the last known point.
You eventually should record this event to your system administrator.
OK

Figure 228: Information Recovery Window

18.4 Shutting Down During Playback

When there is a playback in progress and the user tries to shutdown the server, they will be prompted to a confirmation window. If they select yes, the server will shut down and playback will stop (Figure 229).

Note: Playback will *NOT* resume when the unit is turned back on.

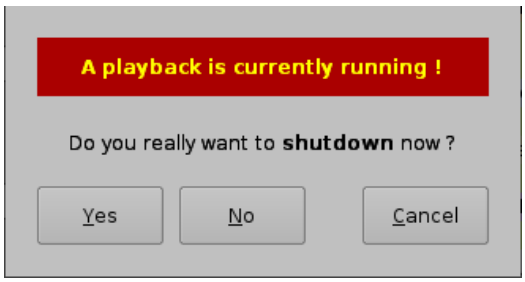


Figure 229: Shutdown Confirmation Window

19 CineLister Control Tab

The customizable and optional Control tab introduced in software version 2.2.0 allows the operator to execute a set of macros in one single click. This feature is particularly useful in emergency cases. For instance, in case of a crash recovery, the player will resume the show but the operator will have to quickly execute some macros such as, “projector lamp on.” Below is a capture of the new Control tab. The **controlview.xml.example** file contains names of macros that should be renamed according to the macro names that already exist, or that the user created on the server.

19.1 Download the File from the FTP

- Download the **controlview.xml.example** file from the Doremi FTP site. Please contact Doremi Labs Technical Support for login credentials.
- Once the file has been downloaded, copy the file into **/doremi/etc/** folder.
- Example: If the file is on a USB flash drive, which mounts as **/media/usb0/** when plugged in a DCP-2000 USB port, type:

  cp /media/usb0/controlview.xml.example /doremi/etc/ <Enter>

19.2 Configuring the Control Tab

- Rename the **controlview.xml.example** file as **controlview.xml**.
- Type: **cp /doremi/etc/controlview.xml.example /doremi/etc/controlview.xml**
- As a system administrator, the user can add or subtract sections and buttons by editing the **controlview.xml** file (e.g., using xedit utility).
- Type: **xedit /doremi/etc/controlview.xml** <Enter>
- This will open the file with xedit text editor. Edit the file to the desired parameters (Section 19.2.1).
- Once finished editing with xedit, click the Save button to save the configuration.
- Close the terminal window.
- CineLister must be closed and opened to refresh the tabs. The Control tab will be displayed after CineLister is closed and opened.

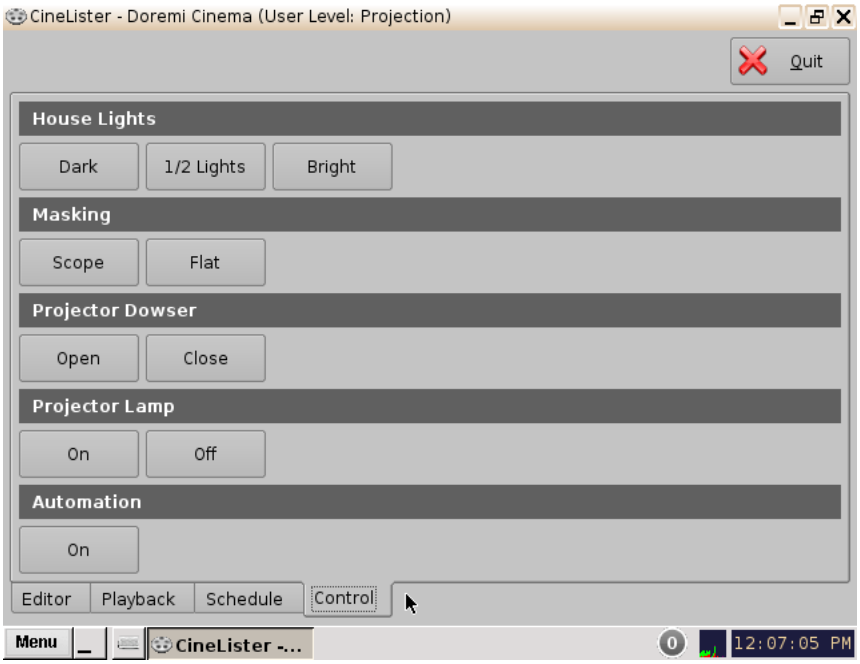


Figure 230: Control Tab

19.2.1 Configuration Example

This an example of a source code for the Control tab image above. The buttons and macros that will be executed need to be based on the pre-existing macros and names on the server.

```
<?xml version="1.0" encoding="UTF-8"?>
<CinelisterControlView>
   <ControlViewList>
         <ControlView>
               <TitleText>House Lights</TitleText>
               <ControlViewButtonList>
                     <ControlViewButton>
                           <Text>Dark</Text>
                           <Execute>MACRO_DARK_LIGHT</Execute>
                     </ControlViewButton>
                     <ControlViewButton>
                           <Text>1/2 Lights</Text>
                           <Execute>MACRO_HALF_LIGHT</Execute>
                     </ControlViewButton>
                     <ControlViewButton>
                           <Text>Bright</Text>
                           <Execute>MACRO_BRIGHT_LIGHT</Execute>
                     </ControlViewButton>
               </ControlViewButtonList>
         </ControlView>
         <ControlView>
               <TitleText>Masking</TitleText>
```

```
                <ControlViewButtonList>
                        <ControlViewButton>
                                <Text>Scope</Text>
                                <Execute>MACRO_SCOPE</Execute>
                        </ControlViewButton>
                        <ControlViewButton>
                                <Text>Flat</Text>
                                <Execute>MACRO_FLAT</Execute>
                        </ControlViewButton>
                </ControlViewButtonList>
        </ControlView>
        <ControlView>
                <TitleText>Projector Dowser</TitleText>
                <ControlViewButtonList>
                        <ControlViewButton>
                                <Text>Open</Text>
                                <Execute>MACRO_PROJECTOR_DOWSER_OPEN</Execute>
                        </ControlViewButton>
                        <ControlViewButton>
                                <Text>Close</Text>

<Execute>MACRO_PROJECTOR_DOWSER_CLOSE</Execute>
                        </ControlViewButton>
                </ControlViewButtonList>
        </ControlView>
        <ControlView>
                <TitleText>Projector Lamp</TitleText>
                <ControlViewButtonList>
                        <ControlViewButton>
                                <Text>On</Text>
                                <Execute>MACRO_PROJECTOR_DOWSER_OPEN</Execute>
                        </ControlViewButton>
                        <ControlViewButton>
                                <Text>Off</Text>

<Execute>MACRO_PROJECTOR_DOWSER_CLOSE</Execute>
                        </ControlViewButton>
                </ControlViewButtonList>
        </ControlView>
        <ControlView>
                <TitleText>Automation</TitleText>
                <ControlViewButtonList>
                        <ControlViewButton>
                                <Text>On</Text>
                                <Execute>RAW_COMMAND</Execute>
```

```
                </ControlViewButton>
            </ControlViewButtonList>
        </ControlView>
    </ControlViewList>
</CinelisterControlView>
```

19.2.2 Basic Example of controlview.xml File

By default, the Control tab does not exist. It is the job of the system administrator to create a configuration file for each player. The configuration file is stored into **/doremi/etc** and the file name is **controlview.xml**. Below is a short sample of a configuration file:

```
<?xml version="1.0" encoding="UTF-8"?>
<CinelisterControlView>
    <ControlViewList>
        <ControlView>
            <TitleText>House Lights</TitleText>
            <ControlViewButtonList>
                <ControlViewButton>
                    <Text>Dark</Text>
                    <Execute>MACRO_DARK_LIGHT</Execute>
                </ControlViewButton>
                <ControlViewButton>
                    <Text>1/2 Lights</Text>
                    <Execute>MACRO_HALF_LIGHT</Execute>
                </ControlViewButton>
                <ControlViewButton>
                    <Text>Bright</Text>
                    <Execute>MACRO_BRIGHT_LIGHT</Execute>
                </ControlViewButton>
            </ControlViewButtonList>
        </ControlView>
    </ControlViewList>
</CinelisterControlView>
```

- CineLister will render this configuration to the capture below:

Figure 231: Control Tab

- Each element <ControlView> defines a section. In the example above, we define a new section with the <TitleText> set to House Lights.
- The list of macro buttons available in a section are defined inside the block <ControlViewButtonList>. Each element <ControlViewButton> defines a macro button in the section and there are two settings that define a macro button: The button text (<Text>) and the macro to execute once the button is pushed (<Execute>).

20 Acronyms

Term	Definition
CCC	China Compulsory Certification
CPL	Composition Play List
DCI	Digital Cinema Initiatives
DLM	Doremi License Message
FPS	Frames Per Second
IMB	Integrated Media Block
GPI	General Purpose Input
GPO	General Purpose Output
HDD	Hard Disk Drive
KDM	Key Delivery Message
LCD	Liquid Crystal Display
LED	Light Emitting Diode
RAID	Redundant Array of Independent Disks
SDI	Serial Digital Interface
SSH	Secured Shell
SPL	Show Play List
VGA	Video Graphics Array
XML	Extensible Markup Language

21 Document Revision History

Date	Version	Description
12/27/2011	1.0	First version.
01/24/2012	1.1	Contact information revised.
07/13/2012	1.2	HDSDI Input (Section 7.5.5.3) added.
06/12/2013	1.3	Added CCC required symbols.
06/24/2013	1.4	Added CCC statement.